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ABSTRACT

An Air Force study examined the relationship between personnel background and several measures of organizational effectiveness. The Organizational Assessment Package (OAS) consisting of 16 background information items and 149 attitudinal items was administered to military and civilian subjects (4,786) at five Air Force bases representing six major commands. Four factors were selected as dependent variables: general organizational climate, organizational communications climate, job related satisfaction, and perceived productivity. Factor scores were generated for each of the four variables and each subject's factor score for each factor served as the dependent variable in a series of one and two-way analyses of variance. Respondents with longer periods of service and high educational levels and whose supervisors wrote their performance report scored highest on all criteria (except for Organizational Communications Climate). Higher criterion ratings were also affected by whether supervisors used group meetings to solve problems and establish goals and by intended duration of Air Force Service. Officers and civilians scored highest in Job Related Satisfaction and Perceived Productivity. Civilians with graduate work perceived General Organizational Climate highest. Graphs and tables present more detailed analyses of responses, and tables in an appendix (two-thirds of the document) provide analyses of variance based on twenty-two separate criteria. (MN)

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# PERSONNEL AND BACKGROUND DIFFERENCES IN ORGANIZATIONAL EFFECTIVENESS

By

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MANPOWER AND PERSONNEL DIVISION
Brooks Air Force Base, Texas 78235

September 1980
Interim Report for Period 14 June 1976 - 28 February 1979

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Research involved a series of one-way and two-way analyses of variance (ANOVA) to establish significant differences between response options associated with Background Information items from the Organizational Assessment Package (OAP). Significant main effects and interactions resulted in tests for simple main effects and post-hoc analyses to establish specific mean pairs which differed significantly from each other. Four criteria which served as dependent variables in the ANOVAs were (a) General Organizational Climate, (b) Organizational Communications Climate, (c) Job Related Satisfaction, and (d) Perceived Productivity. These criteria were collected with the OAP, and were four orthogonal factors extracted during a previous study. A few of the significant differences found were that, overall, those who

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were in an organization more than 36 months scored higher on the criteria than did other groups of individuals. Supervisors of larger numbers of people also scored higher than did other groups of individuals. A supervisor who used work group meetings to set goals and solve problems resulted in his workers being more satisfied, and perceived productivity and the organization's climate to be better. Civilians reported higher job related satisfaction than did officers and airmen. Airmen perceived work group productivity to be lower than did officers and civilians.

## PREFACE

This research was completed under Work Unit 2313T103, Supervisory Style Effects on Productivity and Retention; in response to Request for Personnel Research 77-10, Development and Analysis of Organizational Assessment Package (OAP).

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# PERSONNEL AND BACKGROUND DIFFERENCES IN ORGANIZATIONAL EFFECTIVENESS

## I. INTRODUCTION

Organizational effectiveness has been, and continues to be, of prime interest to personnel in all types of organizations. Empirically assessing organizational effectiveness has been wrought with difficulty in that no ultimate criterion exists. A contingency approach to organizational effectiveness considers effectiveness to be a function of the manager, the situational environment, and the criterion of success (Hendrix, 1976; Wofford, 1971). Within this framework, no one criterion of effectiveness is postulated; rather, many criteria may be appropriate depending on the other components of the model (i.e., the situation and the manager). Many researchers have noted that organizations operate within this type of model. Organizations have a variety of often contradictory goals (Cameron, 1978; Dubin, 1976; Perrow, 1970). Effectiveness criteria at one organizational level may differ from those at other levels (Price, 1972; Weick, 1977), and criteria appropriate at one point in time may be less appropriate at later times.

This technical report focuses on research conducted using a contingency model of organizational effectiveness. Four criteria related to organizational effectiveness were used as dependent variables when performing analyses to determine significant differences between Background Information response options. The Background Information items were from the Organizational Assessment Package (OAP), which is a survey for identifying organizational strengths and weaknesses. The development of this survey was previously reported by Hendrix and Halverson (1979). The OAP was developed for use by the Air Force Leadership and Management Development Center (LMDC), Maxwell AFB, Alabama. The mission of LMDC includes (a) providing consultative services to Air Force commanders, (b) providing leadership and management training to Air Force personnel in their work environment, and (c) performing research in support of (a) and (b). The LMDC consultative role involves organizational problem area identification and recommendations for reducing or eliminating problems identified. The OAP was designed to meet these LMDC objectives.

## II. METHOD

### Sample

Data were collected by Air Force consultants who administered the Organizational Assessment Package at selected Air Force installations to all available personnel. The sample consisted of 4786 subjects (military and civilian) at five Air Force bases representing six major commands. The sample's composition was (a) 2% high school non-graduates, 39% high school graduates or general equivalency diploma (GED) certified, 37% some college work, 9% bachelor degrees, 6% some graduate work, 6% master degrees, 1% doctoral degrees; (b) 78% white, 10% black, 5% hispanic, 7% listed as other than white, black or hispanic; (c) 86% males, 14% females; (d) 17% officers, 66% airmen, and 17% civilians.

### Survey Instrument

The OAP used for data collection consisted of 16 Background Information items and 149 attitudinal items. The attitudinal items were 7-point (some contained a 0 point for "not applicable" responses) Likert scales which measured areas related to the job, one's supervisor, the organizational climate, the perceived productivity of one's work group, and satisfaction.

### Procedure

In a previous study (Hendrix and Halverson, 1979), 21 orthogonally rotated factors were extracted during factor analysis of the 149 attitudinal items. Four of these factors were selected as dependent variables for the present study. They were: General Organizational Climate, Organizational Communications Climate, Job Related Satisfaction, and Perceived Productivity. Factor scores were generated for each of these four factors. Each subject's factor score for each factor served as the dependent variable in a series of one-way and two-way analyses of variance (ANOVAs). Cell size was unequal in many of the analyses performed during this research effort; when cell sizes are unequal, many different hypotheses can be tested. This research tested hypotheses with unequal cell size the same way as is traditionally accomplished for equal cell designs. For example, main effects hypotheses for a 2 x 3 design using dot notation to represent rows and columns would be written:

$$H1: \mu_{1.} = \mu_{2.}$$

$$H2: \mu_{.1} = \mu_{.2} = \mu_{.3}$$

Carlson and Timm (1974) and Speed and Hocking (1976) discuss the hypotheses tested under various procedures when cell sizes are unequal. For main effects found significant, simple main effects were performed. Significant simple main effects were, in turn, analyzed by Newman-Keuls Sequential Range Tests to identify at a given level of a factor specific means that were significantly different. Table 1 lists those Background Information items that were analyzed and includes item numbers and the reponse options for each item.

The following one-way ANOVAs were performed for items: 3, 4, 7 to 12, and 14 to 16. In addition, data which had been collected on subject's Major Command of Assignment, Organizational Level, and Work Group Code were also analyzed using a one-way ANOVA.

Four two-way ANOVAs were performed for the following items: (a) 1 x 2 (Classification by Grade), (b) 1 x 5 (Classification by Race), (c) 1 x 6 (Classification by Sex), and (d) 5 x 13 (Sex by Communication).

## III. RESULTS AND DISCUSSION

Results are reported first for one-way ANOVAs. Each Background Information item's results are reported for each of the four dependent variables: General Organizational Climate, Organizational Communications Climate, Job Related Satisfaction, and Perceived Productivity. Then the two-way ANOVAs are reported for each of the four dependent variables. Newman-Keuls Sequential Range Tests were performed at the .05 level of significance. Detailed results of each analysis are provided in Appendix A to V.

*Table 1.* Background Information Items

| Item Nr | Item Statement |
|---|---|
| 1. | You Are An: |
| | 1. Officer |
| | 2. Airman |
| | 3. Civilian (GS) |
| | 4. Civilian (wage employee) |
| | 5. Non-Appropriated Fund (NAF) employee |
| | 6. Others |
| 2. | Your Grade Level Is: |
| | 1. 1—3 |
| | 2. 4—5 |
| | 3. 6—7 |
| | 4. 8—9 |
| | 5. 10—12 |
| | 6. 13—15 |
| | 7. 16 or higher |
| 3. | Total Months in This Organization Is: |
| | 1. Less than 1 month |
| | 2. More than 1 month, Less than 6 months |
| | 3. More than 6 months, Less than 12 months |
| | 4. More than 12 months, Less than 18 months |
| | 5. More than 18 months, Less than 24 months |
| | 6. More than 24 months, Less than 36 months |
| | 7. More than 36 months |
| 4. | Total Months Experience in Present Job Is: |
| | 1. Less than 1 month |
| | 2. More than 1 month, Less than 6 months |
| | 3. More than 6 months, Less than 12 months |
| | 4. More than 12 months, Less than 18 months |
| | 5. More than 18 months, Less than 24 months |
| | 6. More than 24 months, Less than 36 months |
| | 7. More than 36 months |
| 5. | Your Race Is: |
| | 1. American Indian or Alaskan native |
| | 2. Asian or Pacific Islander |
| | 3. Black, not of Hispanic Origin |
| | 4. Hispanic |
| | 5. White, not of Hispanic Origin |
| | 6. Other |
| 6. | Your Sex Is: |
| | 1. Male |
| | 2. Female |
| 7. | Your Highest Educational Level Obtained Is: |
| | 1. Non high school graduate |
| | 2. High school graduate or GED |
| | 3. Some college work |
| | 4. Bachelor's degree |
| | 5. Some graduate work |
| | 6. Master's degree |
| | 7. Doctoral degree |
| 8. | Highest Level of Professional Military Education (Residence or Correspondence): |
| | 0. None or not applicable |
| | 1. NCO Orientation Course or USAF Supervisor Course (NCO Phase 1 or 2) |
| | 2. NCO Leadership School (NCO Phase 3) |
| | 3. NCO Academy (Phase 4) |
| | 4. Senior NCO Academy (Phase 5) |
| | 5. Squadron Officer School |
| | 6. Intermediate Service School (Officer) |
| | 7. Senior Service School (Officer) (i.e., Air War College) |
| 9. | How many People Do you Directly Supervise (i.e., Those You Write Performance Reports On): |
| | 1. None |
| | 2. 1 to 2 |
| | 3. 3 to 5 |
| | 4. 6 to 8 |
| | 5. 9 to 12 |
| | 6. 13 to 20 |
| | 7. 21 or more |
| 10. | Does Your Supervisor Actually Write Your Performance Report? |
| | 1. Yes |
| | 2. No |
| 11. | Your Work Requires You To Work Primarily: |
| | 1. Alone |
| | 2. With one or two people |
| | 3. As a small group team member |
| | 4. As a large group team member (6 or more people) |
| | 5. Other |
| 12. | How Stable Are Your Work Hours? |
| | 1. Highly stable-routine 8 hrs |
| | 2. Very stable-nearly routine 8 hrs a day |
| | 3. Moderately stable-shift work which periodically changes |
| | 4. Slightly unstable irregular working hours |
| | 5. Highly unstable-frequent TDYs, frequently on call |
| 13. | Your Job Requires How Much Communication Between Workers? |
| | 1. Very little |
| | 2. Little |
| | 3. Moderate |
| | 4. Very frequent |
| | 5. Almost continuous |

Table 1 (*Continued*)

| Item Nr | Item Statement | Item Nr | Item Statement |
|---|---|---|---|
| 14. | To What Extent in Your Work Group Are Group Meetings Used to Solve problems and Establish Goals? | | 4. Shift work, usually days and nights |
| | 1. None | | 5. Daily work only |
| | 2. Occasionally | | 6. Crew schedule |
| | 3. About half the time | | 7. Other |
| | 4. Almost totally | 16. | Which of the Following Best Describes Your Career Intentions? |
| 15. | Your Work Schedule is Basically: | | 1. To continue in the Air Force |
| | 1. Shift work, usually days | | 2. Will most likely continue in the Air Force |
| | 2. Shift work, usually swing shift | | 3. May continue in the Air Force |
| | 3. Shift work, usually nights | | 4. Planning to retire in the next 12 months |
| | | | 5. Other |

**Analysis 1, Item 3, Total Months in Organization**

In considering the total months in organization, significant main effects were found for General Organizational Climate, Job Related Satisfaction, and Perceived Productivity ($p < .001$), as well as for Organizational Communications Climate ($p < .01$). (See Appendix A for details.) As noted in Figure 1, the criterion standard score was significantly higher for response 7 (more than 36 months in the organization) for the three criteria of General Organizational Climate, Job Related Satisfaction, and Perceived Productivity. Those subjects reporting that they had been with the organization less than 6 months (response 1), however, appeared to perceive the Organizational Communications climate better than other subjects.

**Analysis 2, Item 4, Total Months Experience in Present Job**

In considering the total months of experience in the present job significant main effects were found for General Organizational Climate, Organizational Communications Climate, and Job Related Satisfaction ($p < .001$), as well as for Perceived Productivity ($p < .005$). (See Appendix B for details.) Figure 2 indicates that subjects with more than 36 months in present job score highest on the criteria of General Organizational Climate and Job Related Satisfaction. Those with less than 6 months rate highest on Organizational Communications Climate. In terms of Perceived Productivity, those rating the highest were those with more than 36 months on present job.

**Analysis 3, Item 7, Your Highest Educational Level Obtained**

In the analysis of highest education level obtained, significant main effects were found for all four criteria (See Appendix C for details.)

Figure 3 indicates that subjects who were high school graduates or had a GED equivalence certificate perceived the General Organizational Climate to be lower than did other subjects: the highest perceptions were held by master degree subjects. For Organizational Communications Climate, doctoral degree subjects clearly rated lower on this criterion. Non-high school graduates, and master and doctoral degree subjects reported greater job satisfaction than did other subjects. Master degree subjects perceived productivity to be higher than did high school graduates, subjects

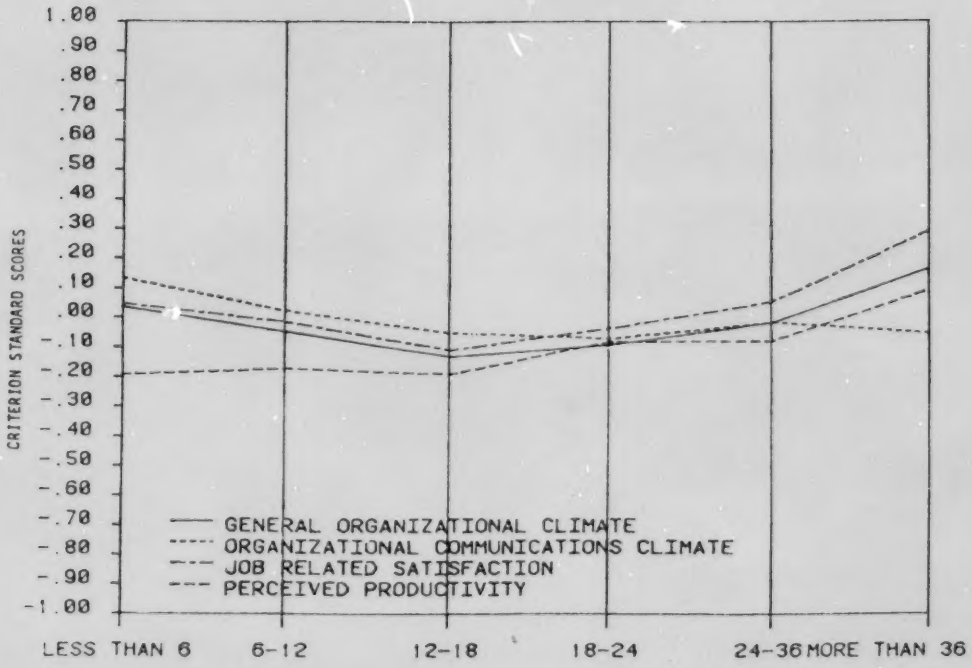


*Figure 1.* **Total months in organization.**

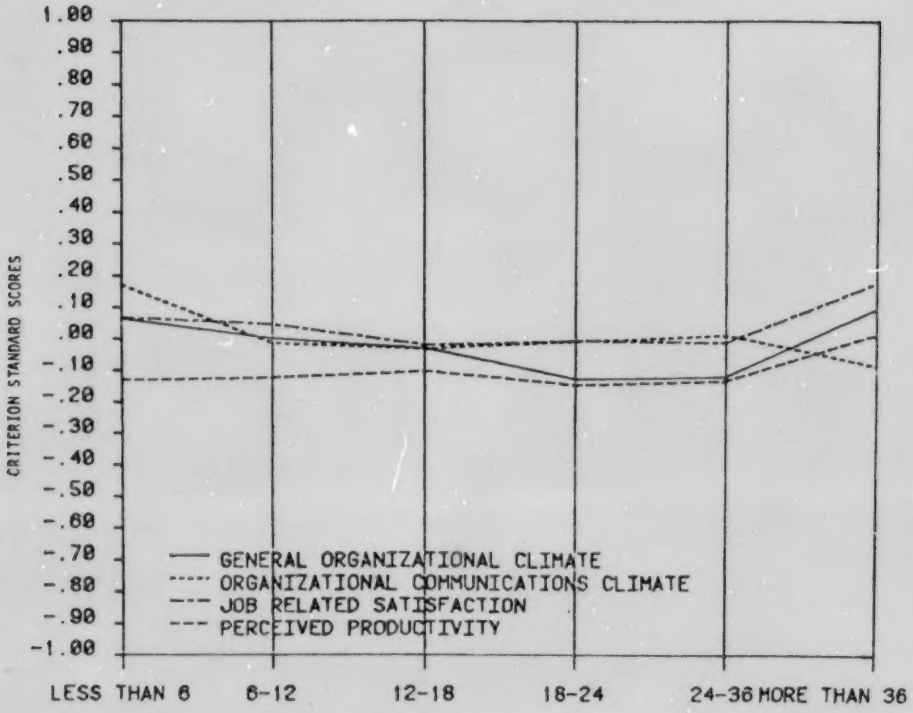


*Figure 2.* **Total months experience in present job.**

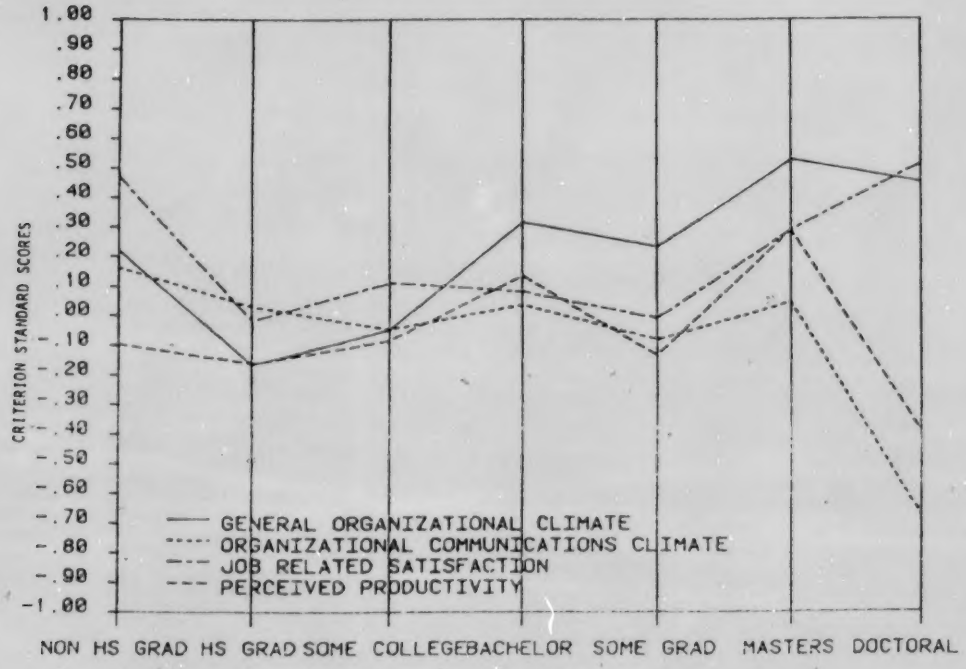


*Figure 3.* **Highest educational level obtained.**

with some college, subjects with some graduate work, and subjects with doctoral degrees. Doctoral degree subjects perceived the General Organizational Climate to be high and were satisfied with their jobs; however, they perceived the Organizational Communications Climate and Productivity to be low.

### Analysis 4, Item 9, Number of People Directly Supervised

In considering how the number of people directly supervised affected the perception of the organization, significant main effects were observed for General Organizational Climate and Perceived Productivity ($p < .001$), as well as for Job Related Satisfaction ($p < .0056$). No significant main effect was found for Organizational Communications Climate. (See Appendix D for details.)

Figure 4 indicates that all criteria, *except* Organizational Communications Climate, increased as the number of personnel supervised increased. For Organizational Communications Climate, there was no significant difference between the supervisory categories.

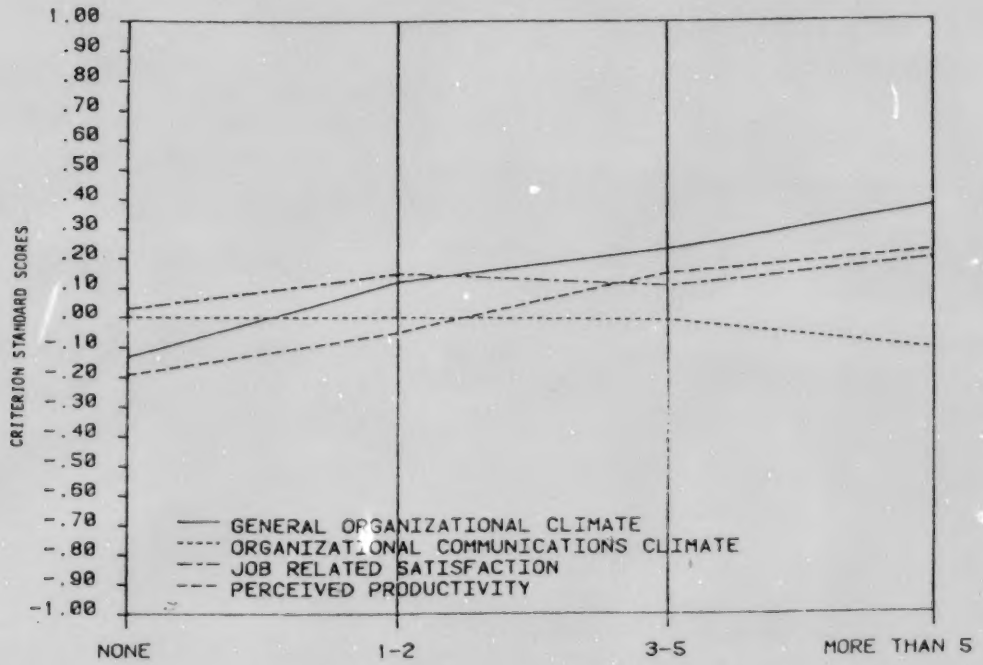


*Figure 4.* Number of people you directly supervised.

### Analysis 5, Item 10, Supervisor Actually Writes Performance Reports

In considering the impact of whether the supervisor actually wrote the performance report, the main effects for all four criteria were significant ($p < .001$). (See Appendix E for details.) As Figure 5 indicates, those subjects whose supervisors write the performance report, scored significantly higher on all four criteria than did those whose supervisors do not write the performance reports. The

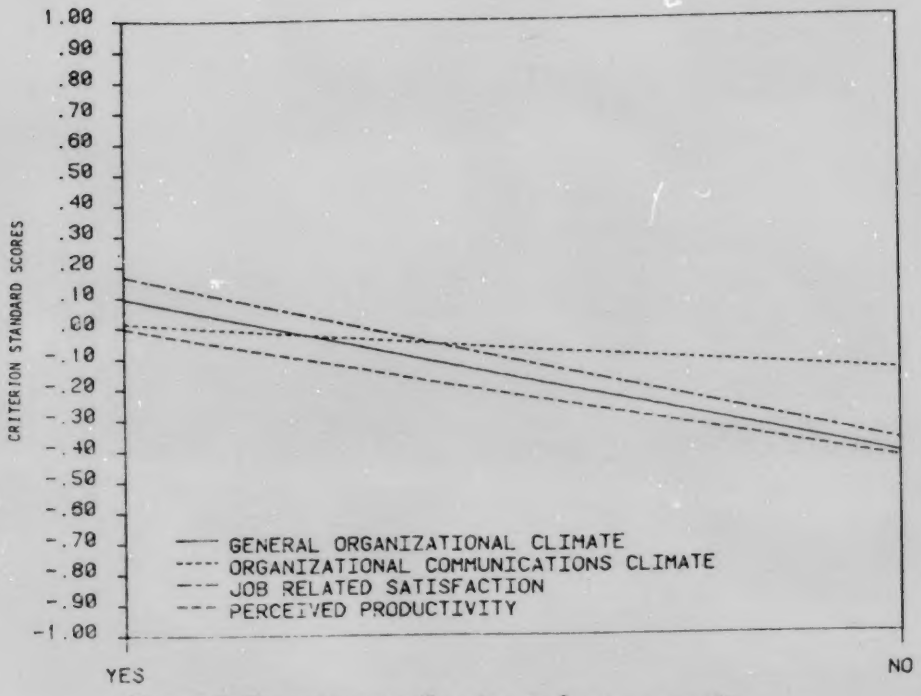


*Figure 5.* **Supervisor actually writes performance reports.**

analysis of variance data based on whether the supervisor actually writes the performance reports are provided in Table E-1, and the Neuman-Keuls Sequential Range Test results are presented in Table E-2. The analysis of variance for General Organizational Climate ($n = 4099$), Organizational Communications Climate ($n = 4099$), Job Related Satisfaction ($n = 3871$), and Perceived Productivity ($n = 4197$) show that the main effects for all four criteria are significant ($p < .001$).

### Analysis 6, Item 11, Size of Work Group

In analyzing the size of the work group, significant main effects were found for General Organizational Climate, Job Related Satisfaction, and Perceived Productivity ($p < .001$). No significant main effect was found for Organizational Communications Climate. (See Appendix F for details.)

With the exception of the criterion of Organizational Communications Climate, whose main effect was not significant, the data indicated that in general large-group team members scored significantly higher on the criteria than did all other groups. For Job Related Satisfaction, there is the exception that those working alone also scored higher than did subjects in the other categories. These differences are depicted in Figure 6.

### Analysis 7, Item 12, Stability of Work Hours

In considering the stability of the work hours, significant main effects were observed for General Organizational Climate, Job Related Satisfaction, and Perceived Productivity ($p < .001$), as

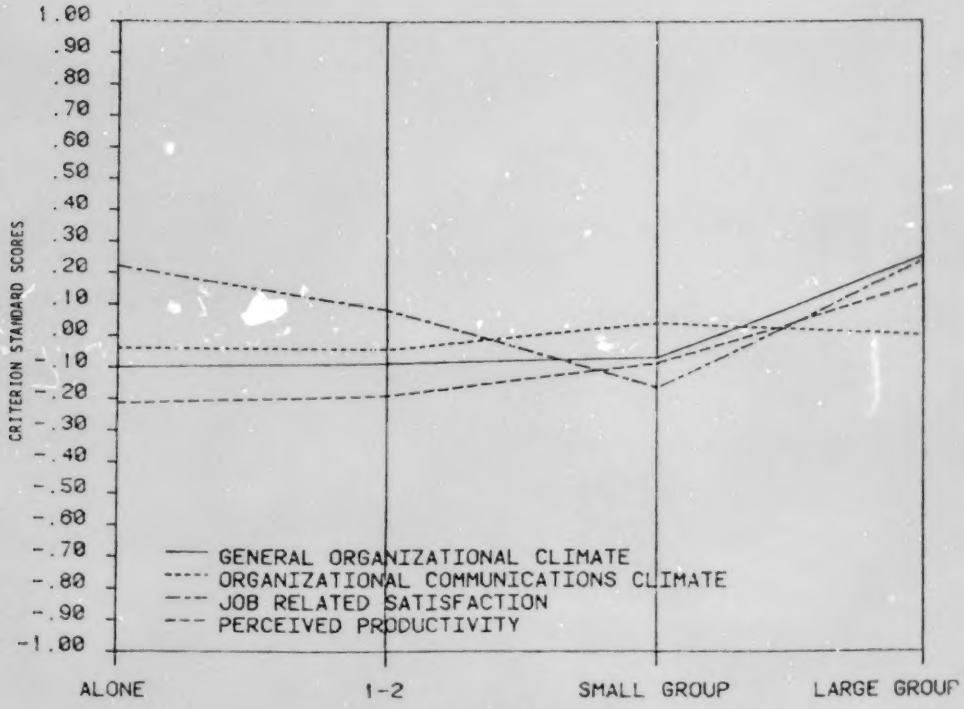


*Figure 6.* **Size of work group.**

well as for Organizational Communications Climate ($p < .01$). (See Appendix G for details.) As shown in Figure 7, the data indicate that in general, the more unstable the working hours, the lower the scores on the four criteria. This relationship was the most apparent for Job Related Satisfaction, with a consistent decrease in the criterion indices as the work environment became more unstable. For General Organizational Climate and Perceived Productivity, the lowest criterion values were obtained for moderately stable work hours.

### Analysis 8, Item 14, Extent that Work Group Meetings are used to Solve Problems and Establish Goals and Objectives

In the analysis of the extent work group meetings are used to solve problems and to establish goals and objectives, for all four criteria, the main effects were significant ($p < 001$). (See Appendix H for details.) Figure 8 indicates that as the use of group meetings to solve problems and set goals increases, so do the four criteria of effectiveness.

The analysis of variance data for the effect of group meetings are provided in Table H-1, and the significant Newman-Keuls Sequential Range Test results are presented in Table H-2. The analyses of variance showed that the main effects were significant ($p < 001$) for General Organizational Climate ($n = 4095$), Organizational Communications Climate ($n = 4095$), Job Related Satisfaction ($n = 3808$), and Perceived Productivity ($n = 4192$).

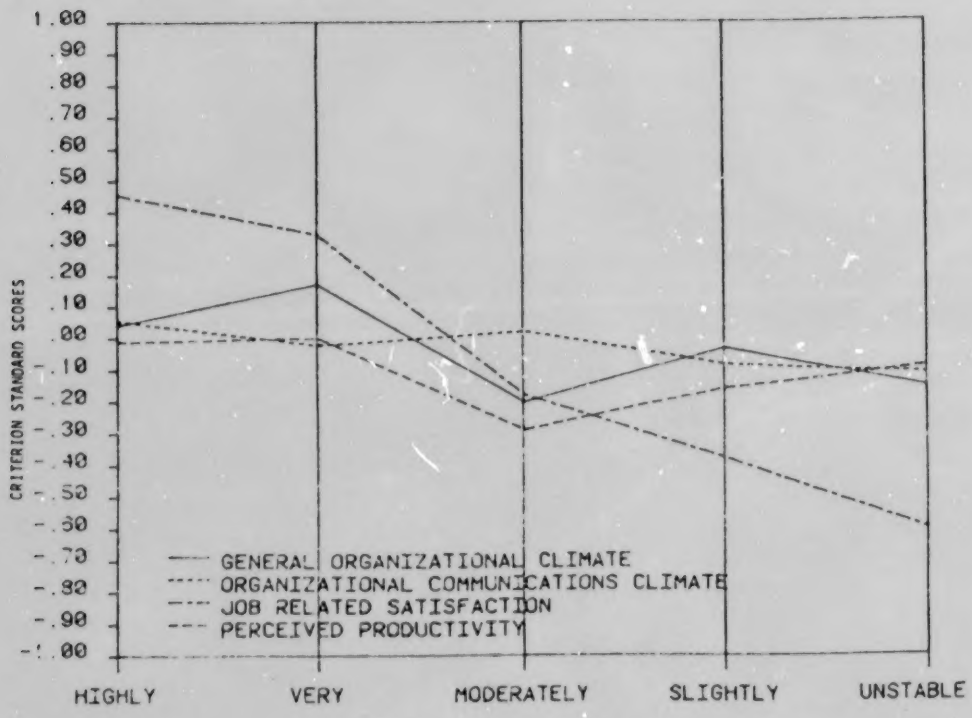


*Figure 7.* **Stability of work hours.**

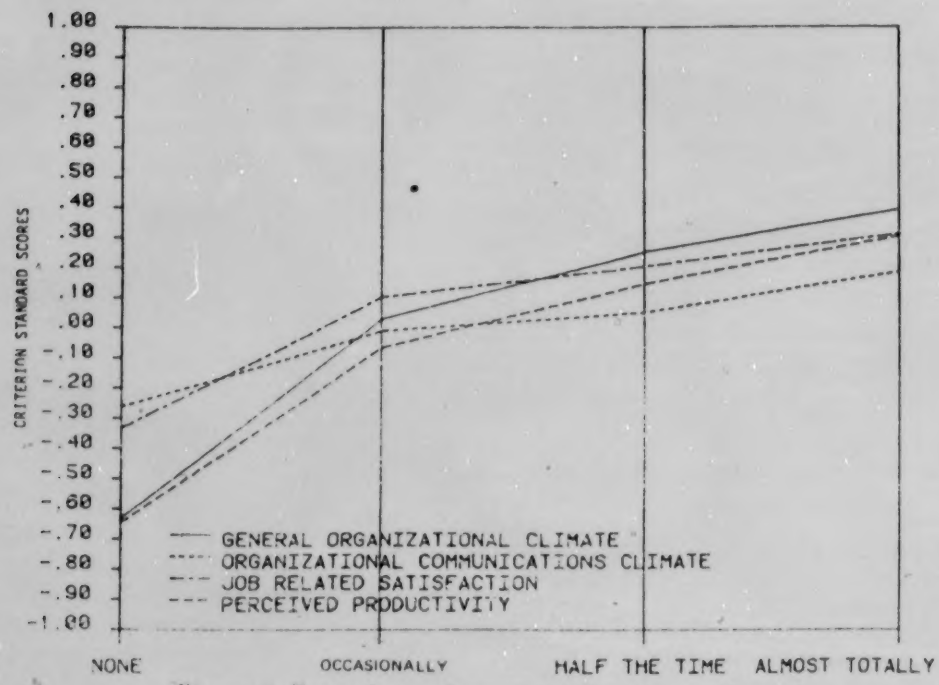


*Figure 8.* **Extent that work group meetings are used to solve problems and establish goals and objectives.**

**Analysis 9. Item 15, Work Schedule**

In considering work schedules, significant main effects were indicated for General Organizational Climate, Job Related Satisfaction, and Perceived Productivity ($p < .001$), as well as for Organizational Communications Climate ($p < .01$). (See Appendix I for details.) Figure 9 shows that response 5 (daily work only) overall had the highest scores on the criteria; the only criterion which had a higher value in another work schedule category was Organizational Communications Climate, which was higher for crew schedule work. Generally, response 2 (shift work, usually swing shifts) had the lowest values for the criteria. For response 5 (crew scheduled work), the values clearly differed between the criteria. For crew scheduled work, subjects reported high Organizational Communications Climate and General Organizational Climate, intermediate magnitude for Perceived Productivity, and low Job Related Satisfaction.

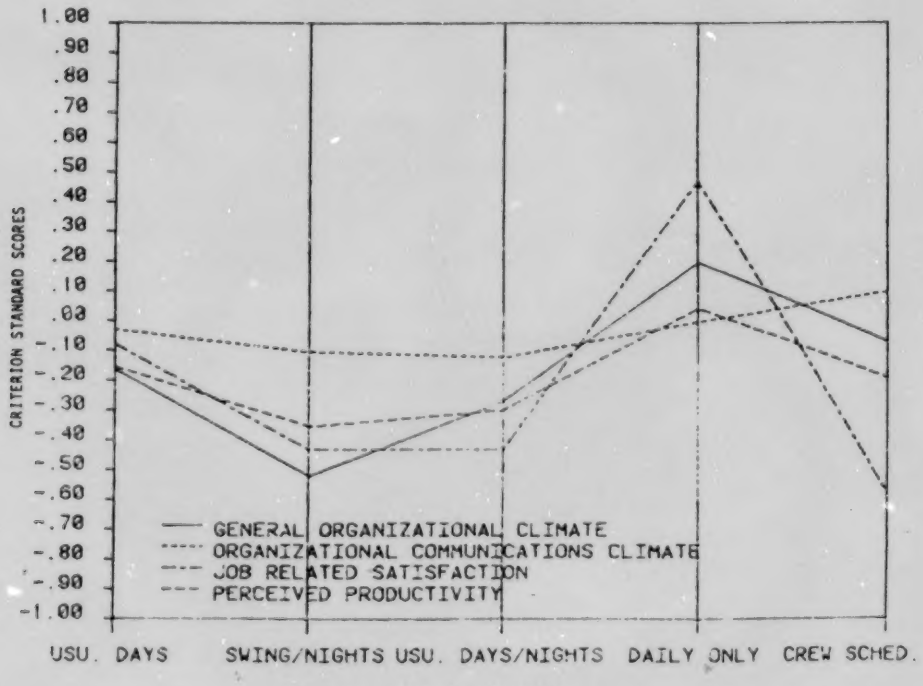


*Figure 9.* **Work schedule.**

**Analysis 10, Item 16, Description of Career Intentions**

The analyses of career intentions (i.e., as regards the Air Force), resulted in significant main effects for all four criteria ($p < .001$). (See Appendix J for details.) As Figure 10 shows, the data indicate the same pattern for all the criteria except Organizational Communications Climate, which had only one pair of significantly different means. Those planning to continue in the Air Force had the highest criterion score, followed by those planning to retire in the next 12 months, and then by those stating that they will most likely continue in the Air Force. Those responding by filling in the "Other" response option had the lowest criterion values. The "Other" response option included

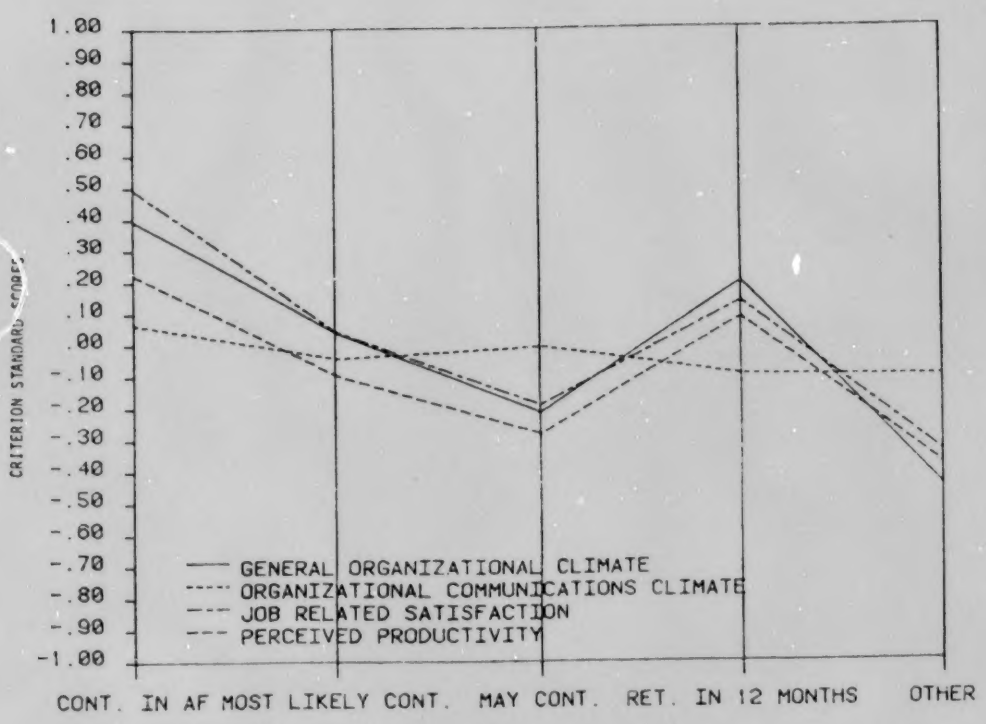


*Figure 10.* **Description of career intentions.**

those planning on exiting the Air Force. The next lowest criterion values were reported by those indicating they may continue in the Air Force. As a general trend, however, those planning to remain in the Air Force scored higher on the criteria.

**Analysis 11, Major Command (MAJCOM)**

In the analysis of how the major command (MAJCOM) affected this study, significant main effects were observed for all criteria ($p < .001$). (See Appendix K for details.) Figure 11 indicates that commands differ in the relative magnitude of the four criterion measures. The MAJCOMs are labelled A to E to insure their anonymity. Generally, scores for commands D and E were lower than for the other commands; however, command A was lowest on Organizational Communications Climate, while command C had the highest reported Organizational Communications Climate. Also, command A had the highest Job Related Satisfaction level of any command, while command D had the lowest reported satisfaction level.

**Analysis 12, Organizational Level**

Table 2 lists the nine organizational levels to be tested for significant differences. Due to insufficient observations, organizational levels 1, 3, 4, and 9 were deleted from the Newman-Keuls Sequential Range Test and from the plot of criteria means in Figure 12. The main effects for all four criteria were significant ($p < .001$). (Significant differences between organizational levels for each criterion are discussed in Appendix L.)

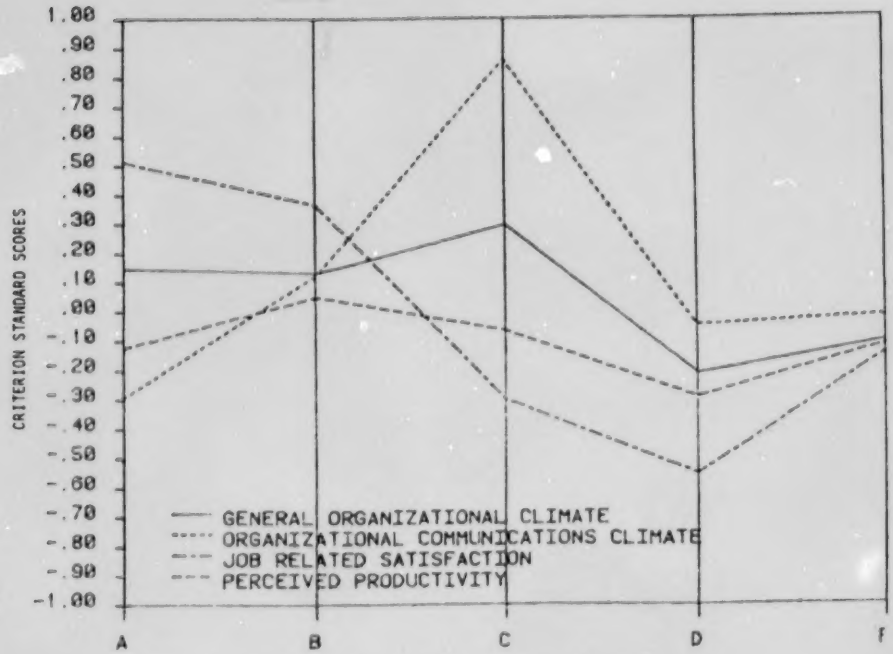


*Figure 11.* **Major Command (MAJCOM).**

*Table 2.* **Organizational Levels**

| Organizational Level Code | Organization/ Agency | Organizational Level Code | Organization/ Agency |
|---|---|---|---|
| 1[a] | Headquarters USAF | 5 | Wing |
| 2 | Major Commands/Separate Operating Agencies | 6 | Group/Base |
| | | 7 | Squadron |
| 3[a] | Numbered Air Force | 8 | Medical |
| 4[a] | Air Division | 9[a] | Specialized Activities |

[a]Not tested.

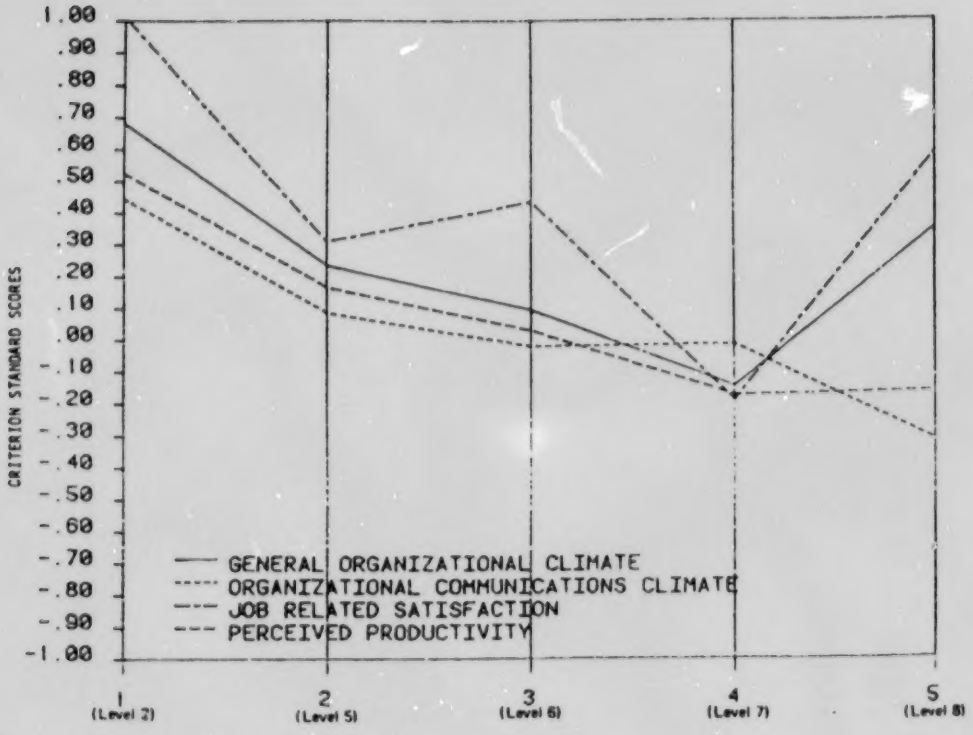


*Figure 12.* **Organizational level.**

The data plotted in Figure 12 indicate a *general* pattern of all four criteria being the highest for Organizational level 2, the next highest for level 5, followed by level 6, and then level 7, which was the lowest overall. The one exception to this pattern was that Job Related Satisfaction was higher for level 6 than for level 5. The criteria for organizational level 8 fell at various criterion values. Job satisfaction was the highest criterion for level 8 and was the second highest value of job satisfaction for any organizational level. The next highest criterion was General Organizational Climate, followed by Perceived Productivity and Organizational Communications Climate.

**Analysis 13, Work Group Codes**

*General.* Table 3 lists the work groups and their work group codes which have been aggregated for all work groups falling under a thousands level. For example, all codes which are of a 1000-series have been aggregated and are designated by the notation 1XXX. The main effects for the four criteria were significant beyond the .001 level of significance (See Appendix M for details.). In Figure 13, a pattern is noted. Work group 1XXX compared to other work groups is high on all four criteria. Work group 8XXX is highest for the criteria of Job Related Satisfaction and General Organizational Climate, but low for Perceived Productivity and the lowest for Organizational Communications Climate when compared to other work groups. Work groups 5XXX and 6XXX are generally lower overall on the four criteria than are other work groups; however, for a given criterion, work group 5XXX or 6XXX may be higher than another work group. For example, work

*Table 3.* **Work Group Codes**

| Code | Aggregated Work Group Title[a] |
|---|---|
| 1XXX | Wing and Base Staff Agencies/Divisions |
| 2XXX | Operations Organizations (DCO) |
| 3XXX | Resources Organizations (DCR) |
| 4XXX | Maintenance Organizations (DCM) |
| 5XXX | Missile Wing and Support Agencies/Divisions |
| 6XXX | Security Police/Civil Engineering/Communications Organizations |
| 7XXX | Medical Services Organizations |
| 8XXX | Research Laboratories and Training Agencies |
| 9XXX[b] | Future use |

[a]Aggregated Work Group title includes all work groups within the given organizational work group title.
[b]Not tested.

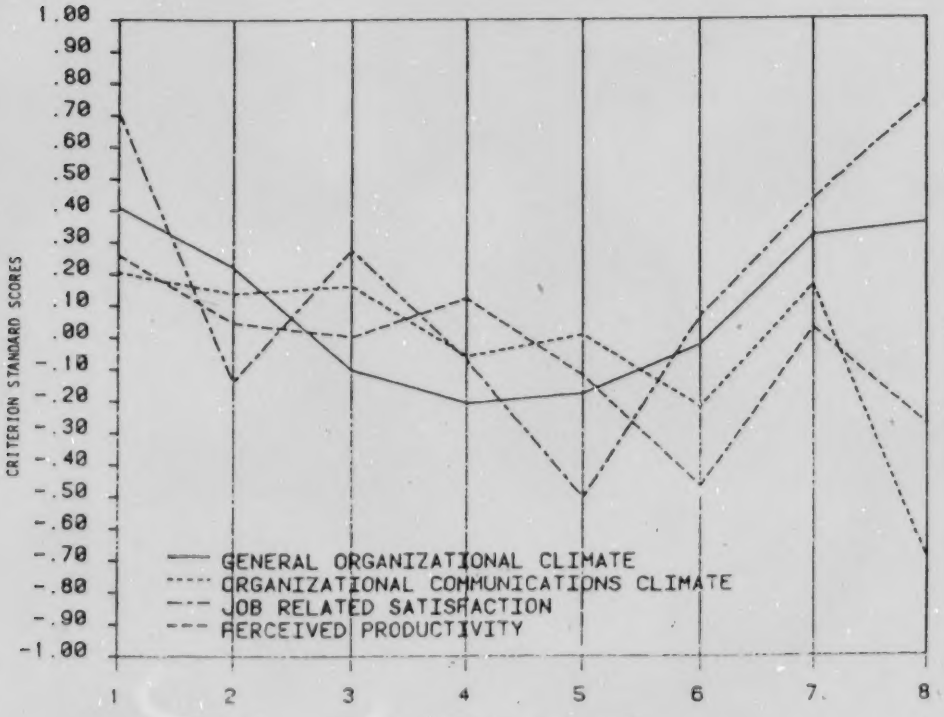


*Figure 13.* **Work group codes.**

group 6XXX is higher than work group 4XXX on General Organizational Climate. Work groups 2XXX, 3XXX, and 7XXX overall fall midway between the other work groups, with work group 4XXX having a slightly lower overall pattern than work groups 2XXX, 3XXX, and 7XXX.

**Analysis 14, Item 7, Highest Educational Level Obtained (Officers)**

*General.* This analysis of the highest educational level obtained involved only officer personnel. Since all officers entering service as of the early 1960's were required to have a bachelor degree, only response options 4 (bachelor degree) through 7 (doctoral degree) were analyzed. The main effects for all four criteria were significant beyond the .001 level of significant. (See Appendix N for details.) As Figure 14 indicates, those with a master degree (response 6) scored significantly higher on all four criteria than those reporting they had some graduate work (response 5). Those with a doctoral degree (response 7) were more satisfied with their jobs than all other respondents. Doctoral degree respondents, however, perceived Productivity and General Organizational Climate to be lower than did all other respondents.

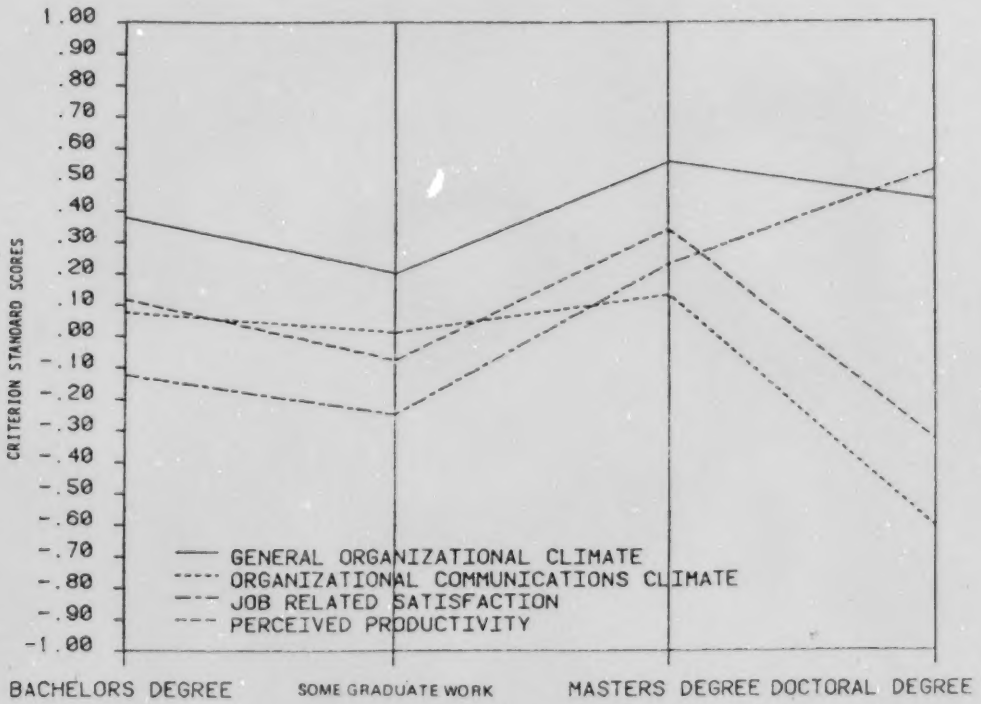


*Figure 14.* **Highest educational level obtained (officers).**

**Analysis 15, Item 8, Highest Level of Professional Military Education Obtained (Officers)**

This analysis of highest level of professional military education obtained involved only officer personnel. The response categories which applied to officers were 0 (none or not applicable), 5 (Squadron Officers School), 6 (intermediate service school), and 7 (senior service school). The main effects for the four criteria were significant beyond the .01 level of significance. (See Appendix O for details.) Figure 15 indicates that, in general, the magnitude of the four criteria increases as the professional military education level increases from the 0 (none or not applicable) response category

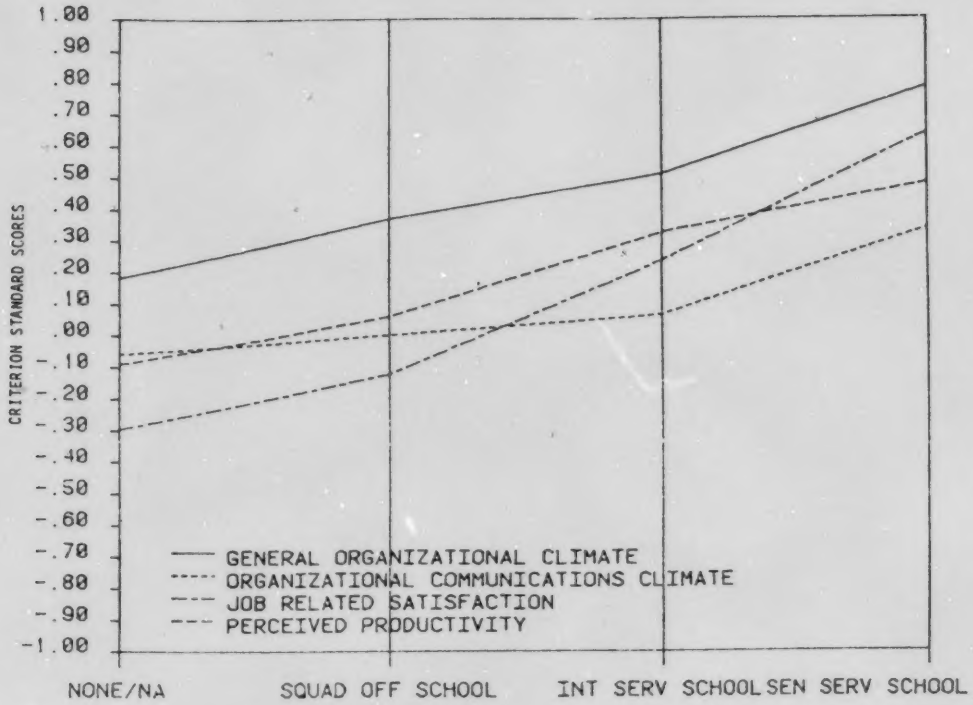


*Figure 15.* **Highest level of professional military education (officers).**

to the 7 (senior service school) response category. For Organizational Communications Climate, the only significant increase is in response option 7 (senior service school), which is higher than all other response categories.

**Analysis 16, Item 7, Highest Educational Level Obtained (Airman)**

*General.* This analysis of the highest educational level obtained involved only enlisted personnel which were identified as *airmen* on the OAP. Since airmen are more likely to be concentrated in the lower educational response options, only responses 1 to 5 were tested. The means tested for significant differences were those associated with responses 1, 2, 3 and the pooled responses for response options 4 (bachelor degree) and 5 (some graduate work). Therefore, this analysis involved testing for significant differences between four groups. Significant main effects were found for General Organizational Climate ($p < .001$) and Job Related Satisfaction ($p < .005$). No significant main effects were found for the other two criteria. (See Appendix P for details.) Figure 16 indicates that those individuals with a bachelor degree or some graduate work had significantly higher job related satisfaction than did high school graduates or GED certified individuals. Also, those with some college reported significantly higher General Organizational Climate and Job Satisfaction than did those with only a high school diploma or GED certificate. No other response options differed significantly from each other.

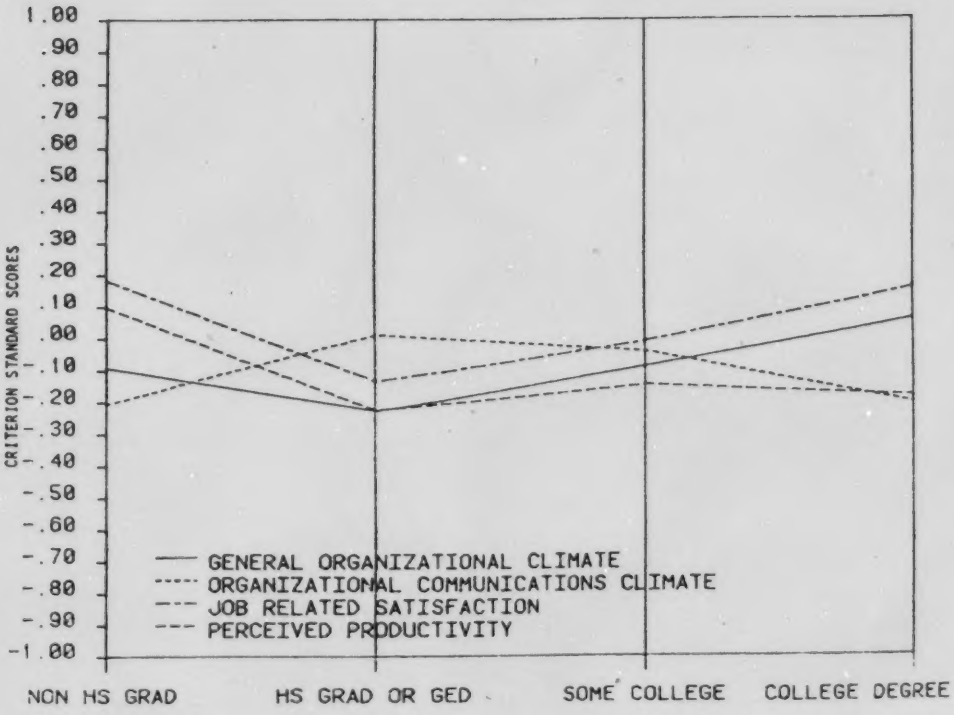


*Figure 16.* **Highest education level obtained (airmen).**

**Analysis 17, Item 8, Highest Level of Professional Military Education Obtained (Airmen)**

This analysis of the highest level of professional military education obtained involved only airmen personnel. Only the response options which applied to airmen were analyzed. These were responses, 0 (none or not applicable), 1 (NCO Orientation Course or USAF Supervisor Course—NCO phase 1 or 2), 2 (NCO Leadership School—NCO phase 3), 3 (NCO Academy—phase 4), and 4 (Senior NCO Academy—phase 5). Significant main effects were found for all criteria except Organizational Communications Climate ($p < .001$). (See Appendix Q for details.)

Figure 17 shows that for all criteria, except Organizational Communications Climate, which had a non-significant main effect, as professional military education increased, there was an increase in the criteria. There was, however, no significant difference between response 0 (no professional military education) and response 1 (NCO Orientation Course or USAF Supervisor Course—NCO phase 1 or 2) on any criterion. Also, for the Perceived Productivity criterion, there was no significant difference between response options 3 (NCO Academy—phase 4) and 4 (Senior NCO Academy—Phase 5). With the exception of these non-significant response pairs, airmen who have more professional military education are more job satisfied, perceive productivity to be higher, and perceive the general organizational climate to be better.

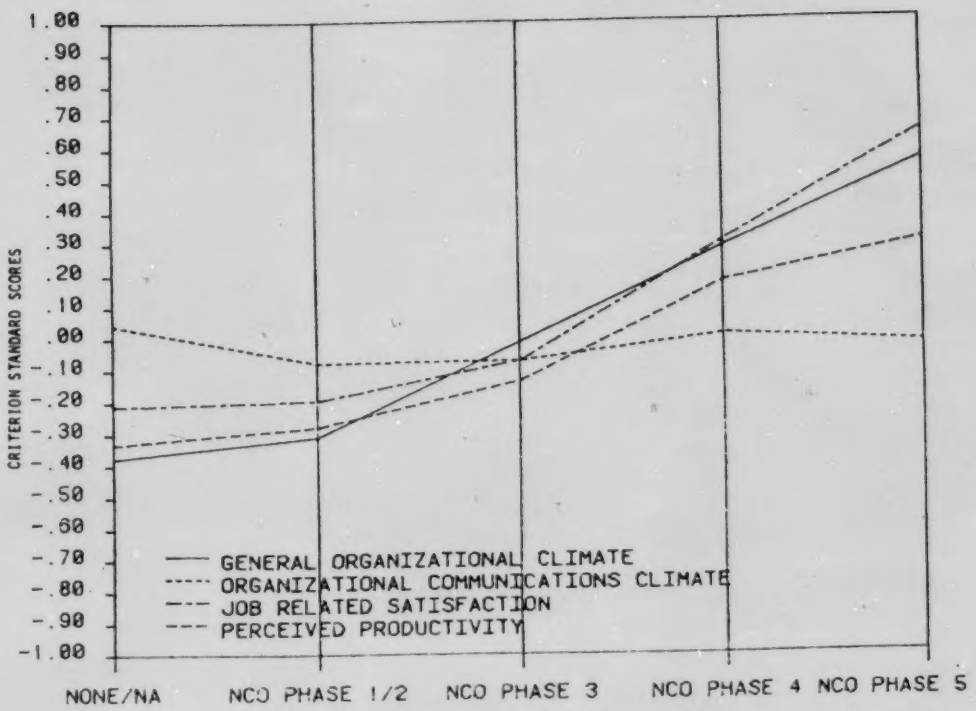


*Figure 17.* **Highest level of professional military education (airmen).**

**Analysis 18, Item 7, Highest Educational Level Obtained (Civilian)**

*General.* This analysis of highest educational level obtained involved only civilian personnel. Four educational levels were tested for significant differences. The response options associated with these levels were response 2 (high school graduate or GED), 3 (some college work), 4 (bachelor degree), and the response options 5, 6, and 7 pooled to form one educational level category (graduate work), due to the small n associated with each of the separate response options. Significant main effects were demonstrated for General Organizational Climate ($p < .005$), Organizational Communications Climate ($p < .001$), and Perceived Productivity ($p < .01$). Significance was not demonstrated for Job Related Satisfaction. (See Appendix R for details.) As Figure 18 indicates, the major effect was for pooled responses 5, 6, and 7. The criterion of Job Related Satisfaction was not significant for any of the educational levels. For General Organizational Climate, the pooled responses 5, 6, 7 (graduate work) were significantly higher than response 3 (some college work). The pooled responses 5, 6, 7 (graduate work) were significantly lower than all other response options for the criterion of Organizational Communications Climate; also, response 3 (some college work) was significantly lower than response 2 (high school graduate or GED) for this criterion. For the Perceived Productivity criterion, the pooled responses 5, 6, 7 (graduate work) was significantly lower than all other response options.

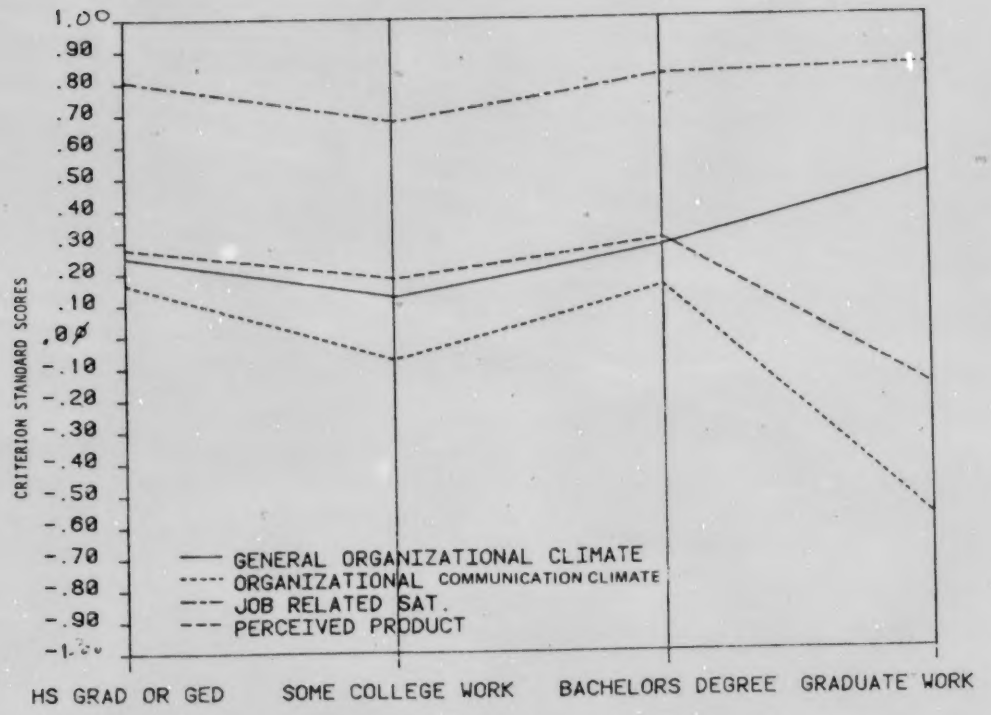


*Figure 18.* **Highest education level obtained (civilians).**

**Analysis 19, Item 1, Classification, by Item 2, Grade**

*General.* Analyses 19 through 22 are a series of two-way ANOVAs. Analysis 19 was performed on the total sample (n =4786) for classification by grade. As with the previous analyses, the n for a given analysis will be less than 4786, since cases with missing data were excluded before performing each analysis. Significant interaction effects were found for all four criteria ($p < .001$). (See Appendix S for details.)

As Figure 19 indicates, a number of relationships exist for classification and grade for the four criteria. For General Organizational Climate, officers up to grade level $g_3$ (6 and 7) perceive the climate to be better than do airmen or civilians. Airmen in grade levels $g_1$ (1 to 3) and $g_2$ (4 and 5) perceive it to be poorer than does any other group. Also, overall, those in grade level $g_3$ (6 and 7) perceive the climate to be better than do other groups. For Organizational Communications Climate, officers and airmen in grades 1 to 3 perceived communications climate to be worse than did civilians. However, officers in grades 4 to 7 ($g_2$ and $g_3$) perceived communications climate to be better than did civilians and airmen. Airmen in grades 8 or 9 ($g_4$) perceived communications climate to be better than did officers or civilians. For Job Related Satisfaction, civilians were more satisfied at all levels compared to airmen and officers; however, at grade level 6 and 7 ($g_3$), officers and civilians did not differ significantly from each other on this criterion. Generally, as grade increases so does reported satisfaction. The major exception involves officers in grade group $g_4$ (8+ ). For Perceived Productivity, airmen in the lower grade groups $g_1$ (1 to 3) and $g_2$ (4 and 5) perceived productivity to be lower than did other groups. The highest perception is for officers in grade groups $g_2$ (4 and 5) and $g_3$ (6 and 7).

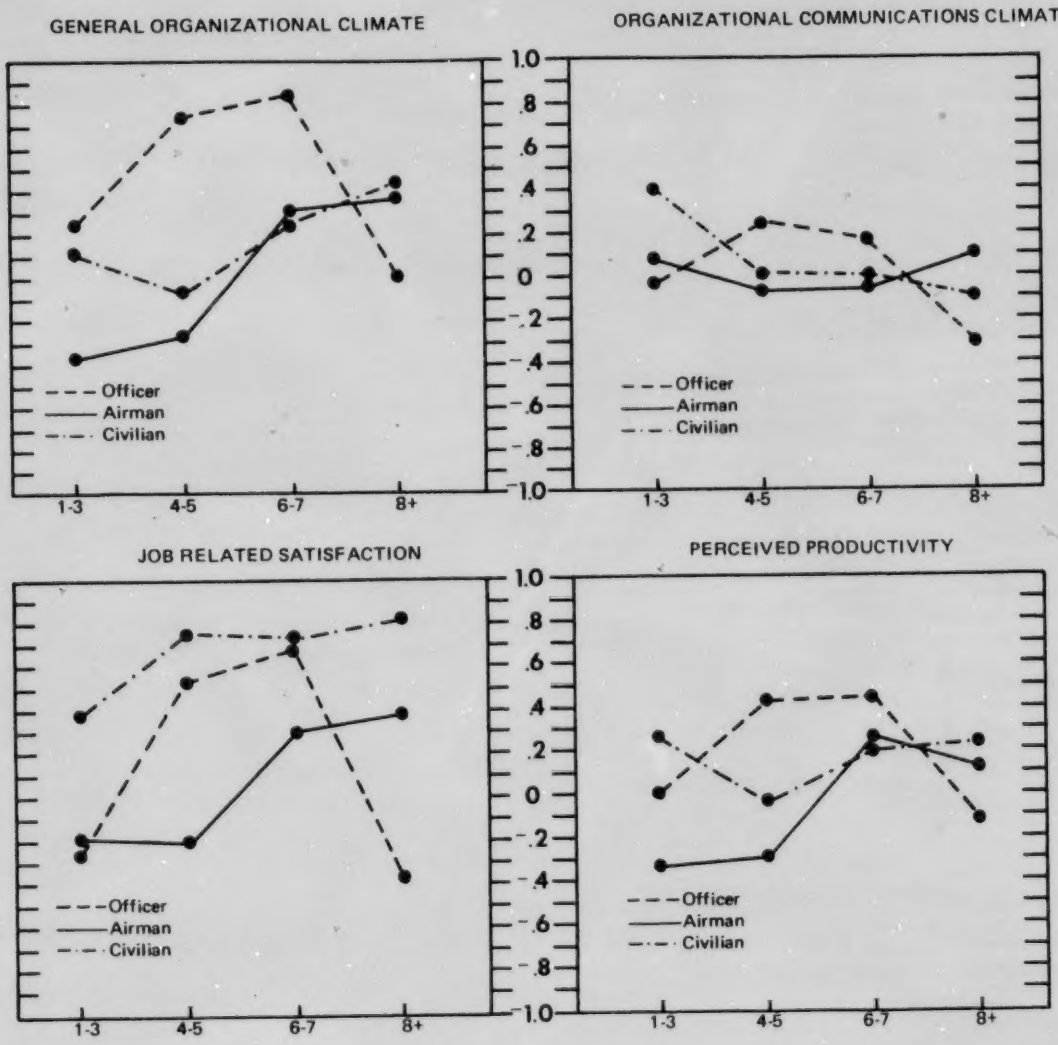


*Figure 19.* Classification by grade for four criteria.

**Analysis 20, Item 1, Classification, by Item 5, Race**

In considering classification by race, significant interaction effects were found for General Organizational Climate ($p < .005$), Job Related Satisfaction ($p < .002$), and Perceived Productivity ($p < .001$), only. (See Appendix T for details.) Figure 20 indicates for the four criteria a series of significant differences. For General Organizational Climate, black and white ($ra_2$ and $ra_3$) officers perceive the general climate to be better than did the "Other" group ($ra_1$). Airmen of all race groups perceived the general climate to be worse than did all other groups, except officers belonging to race group "Other" ($ra_1$) who also perceived the climate to be worse than did other groups. There were no significant differences for classification and race groups using the criterion of Organizational Communications Climate. For Job Related Satisfaction, the predominant difference is for civilians,

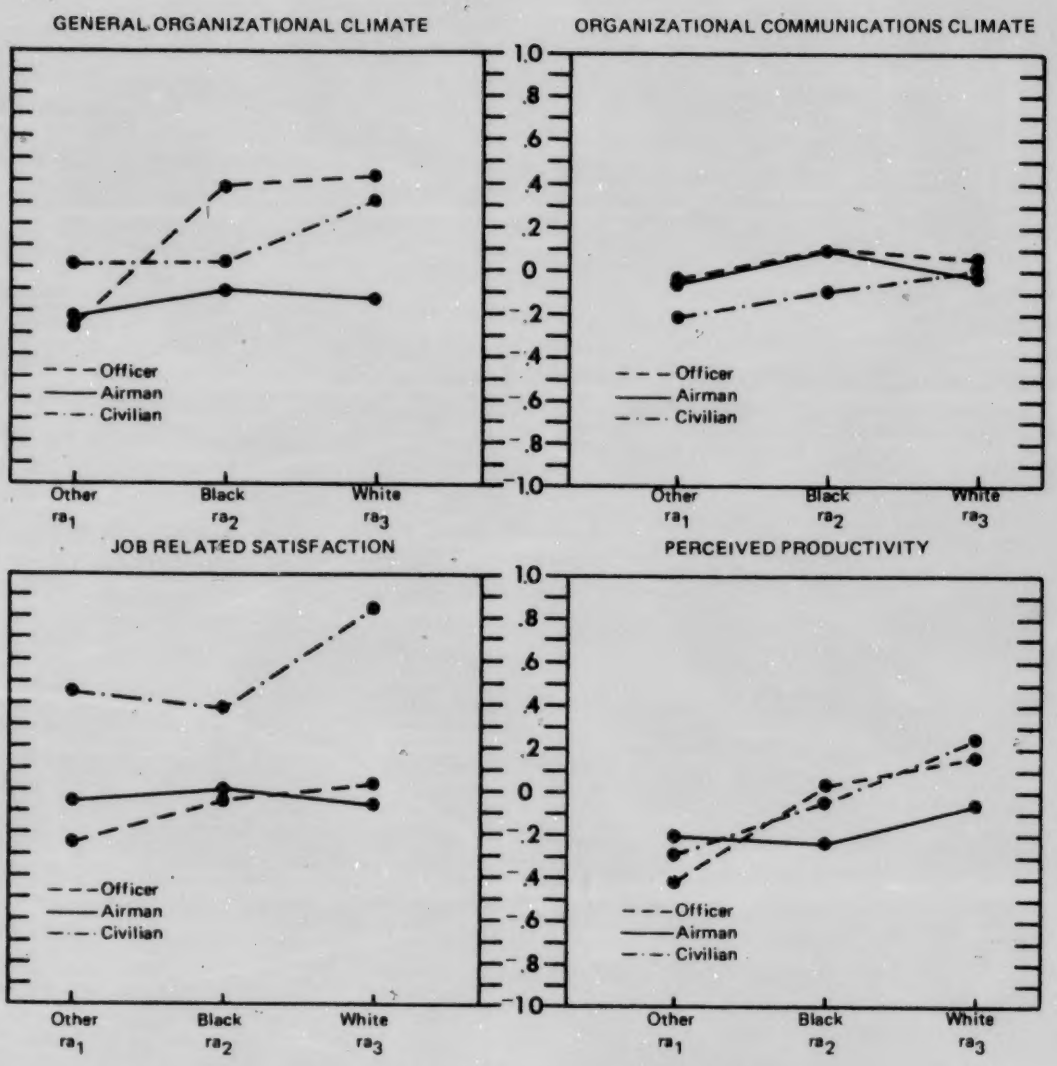


*Figure 20.* Classification by Race for four criteria.

who are more satisfied than are officers or airmen. This pattern is statistically significant for whites ($ra_3$) and those listed as "Other" ($ra_1$). For Perceived Productivity, white airmen perceived productivity to be lower than did white officers or white civilians. Those officers and civilians listed as belonging to the race group "Other" ($ra_1$) perceived productivity to be worse than did white officers and civilians.

**Analysis 21, Item 1, Classification, by Item 6, Sex**

The only significant interaction effect found was for Perceived Productivity ($p < .02$). (See Appendix U for details.) Figure 21 indicates a general pattern for all criteria, except Organizational Communications Climate which had no significant differences. Officers and civilians scored higher

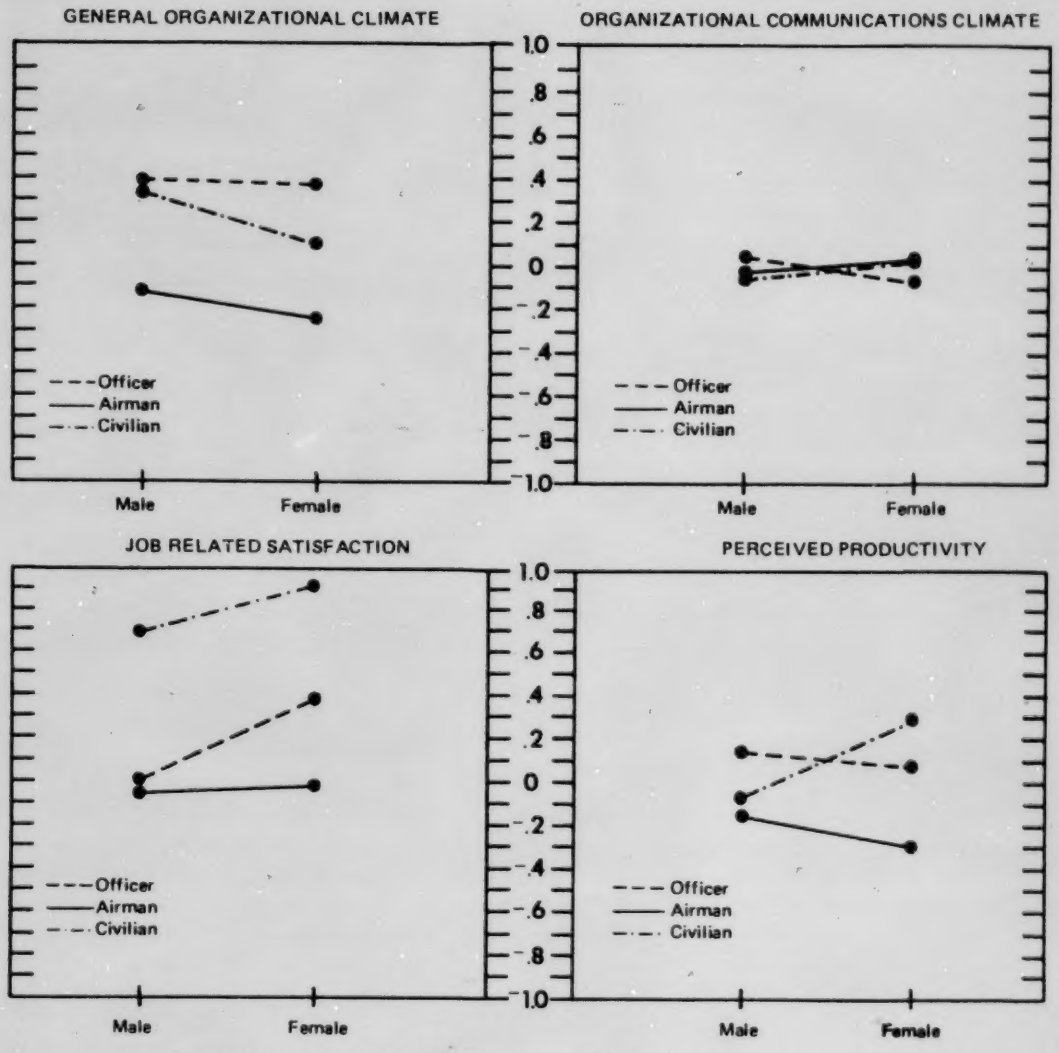


*Figure 21.* Classification by sex for four criteria.

on their criterion responses than did airmen. That is, officers and civilians perceived the General Organizational Climate and Productivity in their organizations to be better than did airmen. Also, civilians were more satisfied with their jobs than were officers and airmen. Another interesting difference, which was limited to civilians, was that males and females differed significantly in their responses for all criteria except Organizational Communications Climate. Female civilians were more satisfied with their jobs and perceived productivity to be higher than did male civilians. On the other hand, male civilians perceived the General Organizational Climate to be better than did female civilians.

**Analysis 22, Item 6, Sex, by Item 13, Communication**

No significant interaction effects were observed for any of the criteria. (See Appendix V for details.) Figure 22 indicates a general trend for the four criteria. Generally, as the amount of communications between workers increased, the reported criterion responses also increased. The major exception was for the criterion of Organizational Communications Climate, where communications and sex factors had non-significant main effects. For General Organizational Climate, the significant differences were limited to males who scored higher as the amount of communications increased from level $c_1$ to $c_4$. For the Job Related Satisfaction criterion, males scored higher on level $c_4$ (almost continuous) than for any other communication level. Female responses at levels $c_3$ (very frequent) and $c_4$ (almost continuous) were only significantly higher than the pooled response options 1 and 2 (very little and little, $c_1$). When Perceived Productivity was used as the criterion, the mean criterion score for males increased with an increase in the amount of communications between workers. For females, scores for group $c_4$ were significantly higher than for groups $c_1$ and $c_2$. Although the main effect for sex was significant, no simple main effects for sex at different levels of communication were found.

## IV. SUMMARY

The major differences noted as a part of this research will not be summarized and discussed. Tables 4 and 5 provide a summary of significant main effects for all one-way and two-way ANOVA.

The first difference noted was that those who had been in an organization (analysis 1) or in the present job (analysis 2) more than 36 months scored higher on the criteria (except for Organizational Communications Climate) than did other groups. Those individuals who had a master or doctoral degree and those who were high school non-graduates had higher reported Job Satisfaction than did all other groups. Also, those with a master degree perceived the General Organizational Climate to be better than did all other groups (analysis 3). One of the clearer relationships dealt with supervision. Those who supervised larger numbers of people scored higher on all criteria except Organizational Climate (analysis 4).

Those individuals who reported that their supervisor wrote their performance report scored higher on all criteria than those reporting that their supervisor did not write their report (analysis 5). When the number of people in a work group are considered, it appears that those working in a large work group (six or more people) scored higher on all criteria except Organizational Communications Climate than did the other groups. One other notable exception was that those working alone also reported high Job Related Satisfaction, and those working as a small team member reported the lowest satisfaction (analysis 6). Stability of work hours was also related to the criteria. The most apparent difference was for Job Related Satisfaction where satisfaction decreased as work hours became more unstable (analysis 7).

The use of work group meetings by supervisors to solve problems and establish goals and objectives presented an interesting pattern. The responses for all four criteria increased as the amount of time dedicated to the use of group meetings increased—the biggest increase being between not using any meetings and using them occasionally (analysis 8). The respondent's work schedule was also related to all criteria, though less so to Organizational Communications Climate. Those on a daily schedule only scored higher than other groups (analysis 9). For career intentions, all criteria except Organizational Communications Climate covaried together. Those stating they planned to stay in the Air Force or to retire in the next 12 months had the highest criterion ratings. On the other

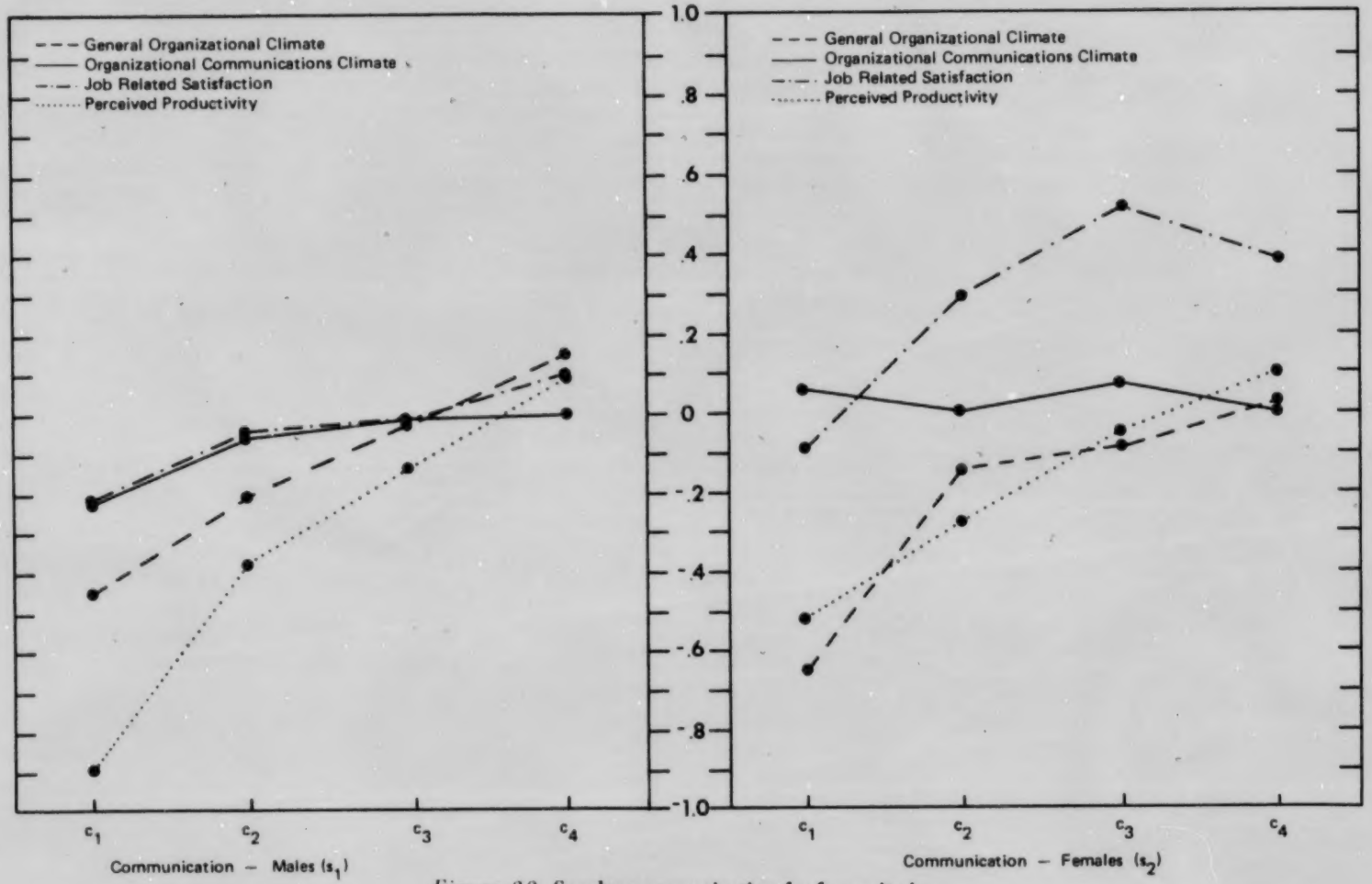


*Figure 22.* Sex by communication for four criteria.

*Table 4.* Summary of One-way Analyses of Variance

| Description | Analysis | Criteria: General Organizational Climate | Organizational Communications Climate | Job Related Satisfaction | Perceived Productivity |
|---|---|---|---|---|---|
| Months in Organization | 1 | *** | ** | *** | *** |
| Months Experience in Job | 2 | *** | *** | *** | ** |
| Educational Level | 3 | *** | *** | *** | *** |
| People Supervised | 4 | *** | | ** | *** |
| Supervisor Writes Performance Report | 5 | *** | *** | *** | *** |
| Work Group Size Group | 6 | *** | | *** | *** |
| Work Hour Stability | 7 | *** | ** | *** | *** |
| Group Meetings Used | 8 | *** | *** | *** | *** |
| Work Schedule | 9 | *** | ** | *** | *** |
| Career Intentions | 10 | *** | ** | *** | *** |
| Major Command (MAJCOM) | 11 | *** | *** | *** | *** |
| Oganizational Level | 12 | *** | *** | *** | *** |
| Work Group Codes | 13 | *** | *** | *** | *** |
| Educational Level—Officers | 14 | *** | *** | *** | *** |
| PME—Officers | 15 | *** | ** | *** | *** |
| Educational Level—Airmen | 16 | *** | | ** | |
| PME—Airmen | 17 | *** | | *** | *** |
| Educational Level—Civilians | 18 | ** | *** | | ** |

*p <.05.
**p <.01.
***p <.001.

*Table 5.* Summary of Two-way Analyses of Variance

| Analysis | Factors | Criteria: General Organizational Climate | Organizational Communications Climate | Job Related Satisfaction | Perceived Productivity |
|---|---|---|---|---|---|
| 19 | 1 Classification | *** | | *** | *** |
| | 2 Grade | *** | * | *** | *** |
| 20 | 1 Classification | *** | | *** | * |
| | 5 Race | *** | | * | *** |
| 21 | 1 Classification | *** | | ** | |
| | 6 Sex | | | | ** |
| 22 | 6 Sex | | | *** | * |
| | 13 Communication | *** | | ** | *** |

*p <.05.
**p <.01.
***p <.001

hand, those stating they may continue in the Air Force or marking the "other" category (which contain those planning on leaving the service) scored the lowest ratings (analysis 10). For Major Commands (MAJCOMs), commands C, D, and E had individuals who clearly were more dissatisfied than commands A and B. Also Command D had lower criterion ratings than did the other commands for all criteria, except Organizational Communications Climate (analysis 11). When organizational level was considered, level 2 (MAJCOM and Separate Operating Agencies) had the highest rating overall for the four criteria, and level 7 (Squadron) the lowest (analysis 12). For work group codes, work group 1XXX (Wing-Base) rated higher overall on the four criteria than did other work groups. In terms of Job Related Satisfaction, work groups 1XXX (Wing-Base) and 8XXX (Research Laboratories and Training Agencies) rated the highest, while group 5XXX (missiles) rated the lowest (analysis 13).

For officers, the clearest relationship associated with educational level was for the criterion of Job Related Satisfaction. Those officers with master and doctoral degrees were more satisfied than those with bachelor degrees or some graduate work (analysis 14). For airmen, those with a bachelor degree or some graduate work, and those with some college work had significantly higher rated job related satisfaction than did high school graduates or GED certified individuals (analysis 16). For both officer and airmen, there were, for all criteria except Organizational Communications Climate, increases in the criterion values as the level of professional military education increased. For airmen, there was no significant difference between those with no professional military education and those with the NCO Orientation Course or USAF Supervisor Course—NCO phase 1 or 2 (analyses 15 and 17) on any criterion.

Civilians with graduate work perceived the General Organizational Climate to be significantly higher than did civilians who only had some college work. However, those civilians who had graduate work perceived the Organizational Communication Climate and Perceived Productivity to be lower than did all other response groups (analysis 18).

For the two-way ANOVA of classification (officer, airmen, civilian) by grade (grades 1 through 8 or more), with the exception of Organizational Communications Climate, the main effects classification and grade and the interaction effects were significant. Officers at or below 0-7 perceived the General Organizational Climate to be better than did airmen and civilians. Airmen in grades E-1 through E-5 perceived the General Organizational Climate to be worse than did any other group. Civilians reported higher Job Related Satisfaction generally than did airmen or officers. Officers in grades 0-4 through 0-7 rated Perceived Productivity higher than did any other group, while the lower grade airmen (E-1 through E-5) rated Perceived Productivity worse than did other groups (analysis 19). The two-way ANOVA of classification by race indicated that black and white officers perceived the General Organizational Climate to be better than did officers in other groups. Airmen of all race groups generally perceived the General Organizational Climate to be poorer than did other groups. For Job Related Satisfaction, the predominant effect is for civilians, who are more satisfied than officers and airmen. Black and white airmen also perceived work group productivity to be lower than did black and white officers and civilians (analysis 20).

The two-way ANOVA of classification by sex had a significant main effect, limited to the classification factor for all criteria, except Job Related Satisfaction, which had main effects significant for both factors. The major difference was that officers and civilians generally perceived Productivity to be higher and perceived the General Organizational Climate to be better than did airmen. Civilians were more satisfied with their jobs. Also, female civilians were more satisfied with their jobs and perceived Productivity to be higher than did male civilians. Male civilians, however, perceived the General Organizational Climate to be better than did female civilians (analysis 21).

For the two-way ANOVA, sex by communication, the general pattern for all four criteria was that as the amount of communication between workers increased, the reported criterion responses also increased. The major exception was for the criterion of Organizational Communications Climate, for which the communications and sex factors had nonsignificant main effects.

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## *APPENDIX A:* TOTAL MONTHS IN ORGANIZATION

The analysis of variance data for total months in the organization are provided in Table A-1, and the Newman-Keuls Sequential Range Test results are presented in Table A-2.

*General Organizational Climate.* The analysis of variance indicated that the main effects for total months in organization was significant ($p < .001$). Significant differences between means within this factor were determined by the Newman-Keuls Sequential Range Test. Response 7 (more than 36 months) was significantly different from all other response options. No other significant differences were found.

*Organizational Communications Climate.* The analysis of variance indicate a significant ($p < .01$) main effect. The Newman-Keuls Test indicated significant differences exist between combined responses 1 and 2 (less than 6 months) and all other responses. No other significant differences were found.

*Table A-1.* **Analysis of Variance Summary Table for Total Months in Organization**

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Between Groups | 5 | 9.3214 | 9.23 | .001 |
| Within Groups | 4102 | 1.0098 | | |
| Total | 4108 | | | |
| | | **Organizational Communications Climate** | | |
| Between Groups | 5 | 3.2125 | 3.12 | .008 |
| Within Groups | 4102 | 1.0281 | | |
| Total | 4108 | | | |
| | | **Job Related Satisfaction** | | |
| Between Groups | 5 | 15.9297 | 13.60 | .001 |
| Within Groups | 3873 | 1.1710 | | |
| Total | 3879 | | | |
| | | **Perceived Productivity** | | |
| Between Groups | 5 | 10.9459 | 9.13 | .001 |
| Within Groups | 4199 | 1.1991 | | |
| Total | 4205 | | | |

*Table A-2.* Newman-Keuls Sequential Range Test for Total Months in Organization

**General Organizational Climate**

| Response Option | | 4 | 5 | 3 | 6 | 1-2 |
|---|---|---|---|---|---|---|
| | Group Number | 3 | 4 | 2 | 5 | 1 |
| 5 | 4 | .914 | | | | |
| 3 | 2 | 2.023 | 1.040 | | | |
| 6 | 5 | 2.881 | 1.894 | .922 | | |
| 1-2 | 1 | 3.767 | 2.845 | 2.006 | 1.157 | |
| 7 | 6 | 7.948* | 6.852* | 6.291* | 5.283* | 3.525* |

**Organizational Communications Climate**

| Response Option | | 5 | 7 | 4 | 6 | 3 |
|---|---|---|---|---|---|---|
| | Group Number | 4 | 6 | 3 | 5 | 2 |
| 7 | 6 | .452 | | | | |
| 4 | 3 | .428 | .048 | | | |
| 6 | 5 | 1.364 | 1.142 | .909 | | |
| 3 | 2 | 2.218 | 2.169 | 1.767 | .929 | |
| 1-2 | 1 | 4.549* | 4.868* | 4.134* | 3.516* | 2.653 |

**Job Related Satisfaction**

| Response Option | | 4 | 5 | 3 | 1-2 | 6 |
|---|---|---|---|---|---|---|
| | Group Number | 3 | 4 | 2 | 1 | 5 |
| 5 | 4 | 1.509 | | | | |
| 3 | 2 | 2.074 | .459 | | | |
| 1-2 | 1 | 3.175 | 1.663 | 1.318 | | |
| 6 | 5 | 3.618 | 1.996 | 1.660 | .215 | |
| 7 | 6 | 9.666* | 7.867* | 8.092* | 5.912* | 6.254* |

**Perceived Productivity**

| Response Option | | 1-2 | 4 | 3 | 5 | 6 |
|---|---|---|---|---|---|---|
| | Group Number | 1 | 3 | 2 | 4 | 5 |
| 4 | 3 | .068 | | | | |
| 3 | 2 | .507 | .435 | | | |
| 5 | 4 | 2.371 | 2.304 | 2.027 | | |
| 6 | 5 | 2.635 | 2.562 | 2.295 | .084 | |
| 7 | 6 | 7.125* | 7.046* | 7.206* | 4.295* | 4.656* |

* $p < .05$.

*Job Related Satisfaction.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Test indicated significant differences were found between response 7 (more than 36 months) and all other responses. No other significant differences were found.

*Perceived Productivity.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Test indicated significant differences between response 7, and all other responses. No other significant differences were found.

## *APPENDIX B:* TOTAL MONTHS EXPERIENCE IN PRESENT JOB

The analysis of variance data for the total months of experience in present job are provided in Table B-1, and the Newman-Keuls Sequential Range Test results are presented in Table B-2.

*General Organizational Climate.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Test indicated significant differences existed between response 7 (more than 36 months) and response 5 (more than 24 months, less than 36 months). Also, significant differences existed between combined responses 1 and 2 (less than 1 month; and more than 1 month, less than 6 months), and responses 5 (more than 18 months, less than 24 months) and 6 (more than 24 months, less than 36 months).

*Organizational Communications Climate.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Test indicated significant differences between combined responses 1 and 2 (less than 1 month; and more than 1 month, less than 6 months), and all other response options.

*Table B-1.* Analysis of Variance Summary Table for Total Months Experience in Present Job

| Source | df | MS | F | p |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Between Groups | 5 | 6.3184 | 6.23 | .001 |
| Within Groups | 4102 | 1.0135 | | |
| Total | 4108 | | | |
| **Organizational Communications Climate** | | | | |
| Between Groups | 5 | 5.4212 | 5.29 | .001 |
| Within Groups | 4102 | 1.0254 | | |
| Total | 4108 | | | |
| **Job Related Satisfaction** | | | | |
| Between Groups | 5 | 5.2201 | 4.41 | .001 |
| Within Groups | 3873 | 1.1848 | | |
| Total | 3879 | | | |
| **Perceived Productivity** | | | | |
| Between Groups | 5 | 4.0623 | 3.36 | .005 |
| Within Groups | 4199 | 1.2073 | | |
| Total | 4205 | | | |

*Table B-2.* Newman-Keuls Sequential Range Test for Total Months Experience in Present Job

**General Organizational Climate**

| Response Option | | 5 | 6 | 4 | 3 | 1-2 |
|---|---|---|---|---|---|---|
| | Group Number | 4 | 5 | 3 | 2 | 1 |
| 6 | 5 | .170 | | | | |
| 4 | 3 | 1.998 | 1.984 | | | |
| 3 | 2 | 2.871 | 2.951 | .769 | | |
| 1-2 | 1 | 4.129* | 4.310* | 2.128 | 1.488 | |
| 7 | 6 | 5.742* | 6.246* | 3.488* | 2.902* | 1.038 |

**Organizational Communications Climate**

| Response Option | | 7 | 4 | 3 | 5 | 6 |
|---|---|---|---|---|---|---|
| | Group Number | 6 | 3 | 2 | 4 | 5 |
| 4 | 3 | 1.380 | | | | |
| 3 | 2 | 2.091 | .435 | | | |
| 5 | 4 | 1.948 | .523 | .138 | | |
| 6 | 5 | 2.759 | 1.014 | .635 | .434 | |
| 1-2 | 1 | 7.196* | 4.568* | 4.466* | 3.871* | 3.745* |

**Job Related Satisfaction**

| Response Option | | 4 | 6 | 5 | 3 | 1-2 |
|---|---|---|---|---|---|---|
| | Group Number | 3 | 5 | 4 | 2 | 1 |
| 6 | 5 | .196 | | | | |
| 5 | 4 | .262 | .083 | | | |
| 3 | 2 | 1.364 | 1.230 | 1.044 | | |
| 1-2 | 1 | 1.777 | 1.667 | 1.454 | .486 | |
| 7 | 6 | 4.735* | 4.856* | 4.238* | 3.557* | 2.838* |

**Perceived Productivity**

| Response Option | | 5 | 6 | 1-2 | 3 | 4 |
|---|---|---|---|---|---|---|
| | Group Number | 4 | 5 | 1 | 2 | 3 |
| 6 | 5 | .258 | | | | |
| 1-2 | 1 | .289 | .035 | | | |
| 3 | 2 | .490 | .248 | .211 | | |
| 4 | 3 | .809 | .609 | .572 | .387 | |
| 7 | 6 | 3.803* | 3.957* | 3.883* | 3.792* | 2.947* |

* $p < .05$.

*Job Related Satisfaction.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Test indicated significant differences between response 7 (more than 36 months) and all other response options.

*Perceived Productivity.* The analysis of variance indicated a significant ($p < .005$) main effect. The Newman-Keuls Test indicated significant differences between response 7 (more than 36 months) and all other response options *except* for response option 5 (more than 18 months, less than 24 months).

## *APPENDIX C:* HIGHEST EDUCATIONAL LEVEL OBTAINED

The analysis of variance data for highest educational level obtained are provided in Table C-1, and the Newman-Keuls Sequential Range Test results are presented in Table C-2.

*General Organizational Climate.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Test indicated significant differences between response 2 (high school graduate or GED) and all other responses; also between response option 3 (some college work) and all other responses. In addition, response 6 (master degree) also differed significantly from responses 4 (bachelor degree) and 5 (some graduate work).

*Organizational Communications Climate.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Test indicated significant differences between response 7, (doctoral degree) and all other response options. Also, responses 2 (high school and GED) and 3 (some college work) differed significantly.

*Table C-1.* **Analysis of Variance Summary Table for Highest Educational Level Obtained**

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Between Groups | 6 | 32.0869 | 32.93 | .001 |
| Within Groups | 4101 | .9745 | | |
| Total | 4108 | | | |
| | | **Organizational Communications Climate** | | |
| Between Groups | 6 | 6.2063 | 6.07 | .001 |
| Within Groups | 4101 | 1.0232 | | |
| Total | 4108 | | | |
| | | **Job Related Satisfaction** | | |
| Between Groups | 6 | 7.8822 | 6.68 | .001 |
| Within Groups | 3872 | 1.1797 | | |
| Total | 3879 | | | |
| | | **Perceived Productivity** | | |
| Between Groups | 6 | 12.4350 | 10.41 | .001 |
| Within Groups | 4198 | 1.1947 | | |
| Total | 4205 | | | |

*Table C-2.* Newman-Keuls Sequential Range Test for Your Highest Educational Level

**General Organizational Climate**

| Response Option | | 2 | 3 | 1 | 5 | 4 | 7 |
|---|---|---|---|---|---|---|---|
| | Group Number | 2 | 3 | 1 | 5 | 4 | 7 |
| 3 | 3 | 4.741* | | | | | |
| 1 | 1 | 4.062* | 2.803* | | | | |
| 5 | 5 | 8.457* | 5.919* | .134 | | | |
| 4 | 4 | 11.926* | 8.957* | .973 | 1.467 | | |
| 7 | 7 | 6.848* | 5.515* | 1.784 | 2.187 | 1.379 | |
| 6 | 6 | 15.528* | 12.823* | 3.010 | 4.884* | 3.817* | .803 |

**Organizational Communications Climate**

| Response Option | | 7 | 5 | 3 | 2 | 4 | 6 |
|---|---|---|---|---|---|---|---|
| | Group Number | 7 | 5 | 3 | 2 | 4 | 6 |
| 5 | 5 | 5.931* | | | | | |
| 3 | 3 | 6.867* | .710 | | | | |
| 2 | 2 | 7.699* | 2.284 | 2.951* | | | |
| 4 | 4 | 7.338* | 2.033 | 2.026 | .197 | | |
| 6 | 6 | 7.283* | 2.063 | 2.017 | .355 | .143 | |
| 1 | 1 | 6.396* | 2.302 | 2.144 | 1.363 | 1.212 | 1.115 |

**Job Related Satisfaction**

| Response Option | | 2 | 5 | 4 | 3 | 6 | 1 |
|---|---|---|---|---|---|---|---|
| | Group Number | 2 | 5 | 4 | 3 | 6 | 1 |
| 5 | 5 | .181 | | | | | |
| 4 | 4 | 2.204 | 1.411 | | | | |
| 3 | 3 | 4.532* | 2.246 | .655 | | | |
| 6 | 6 | 6.069* | 4.386* | 3.357* | 3.497* | | |
| 1 | 1 | 4.207* | 3.846 | 3.206 | 3.093 | 1.480 | |
| 7 | 7 | 5.235* | 4.696* | 4.014* | 3.954* | 2.041 | .268 |

**Perceived Productivity**

| Response Option | | 7 | 2 | 5 | 1 | 3 | 4 |
|---|---|---|---|---|---|---|---|
| | Group Number | 7 | 2 | 5 | 1 | 3 | 4 |
| 2 | 2 | 2.333 | | | | | |
| 5 | 5 | 2.400 | .565 | | | | |
| 1 | 1 | 2.708 | .626 | .311 | | | |
| 3 | 3 | 3.135 | 2.861 | .956 | .147 | | |
| 4 | 4 | 5.049* | 6.714* | 4.285* | 2.161 | 4.913* | |
| 6 | 6 | 6.374* | 9.146* | 6.356* | 3.500 | 7.517* | 2.517 |

* $p < .05$.

*Job Related Satisfaction.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Test indicated significant differences between response 2 (high school graduate or GED) and response 3 (some college work). Response 6 (master degree) and response 7 (doctoral degree) differed significantly from responses 2, 3, 4, 5 (some college work—some graduate work). Response 1 (high school non-graduate) differed significantly from response 2 (high school graduate or GED).

*Perceived Productivity.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated response 4 (bachelor degree) and response 6 (master degree) each differed significantly from responses 2, 3, 5, and 7.

## *APPENDIX D:* NUMBER OF PEOPLE DIRECTLY SUPERVISED

The analysis of variance data for number of people directly supervised are provided in Table D-1, and the Newman-Keuls Sequential Range Test results are presented in Table D-2.

*General Organizational Climate.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between all pairs of means *except* for responses 2 (1 to 2 people) and 3 (3 to 5 people) which were not significant.

*Organizational Communications Climate.* The analysis of variance showed that the main effect was not significant.

*Job Related Satisfaction.* The analysis of variance indicated a significant ($p < .01$) main effect. The Newman-Keuls Sequential Range Test indicated a significant difference between response 1 (none) and the combined responses 4, 5, 6, and 7 (6 to 21 or more).

Table D-1. Analysis of Variance Summary Table for Number of People You Directly Supervise

| Source | df | MS | F | p |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Between Groups | 3 | 50.3169 | 51.14 | .001 |
| Within Groups | 4104 | .9839 | | |
| Total | 4108 | | | |
| **Organizational Communications Climate** | | | | |
| Between Groups | 3 | 1.6211 | 1.57 | .194 |
| Within Groups | 4104 | 1.0303 | | |
| Total | 4108 | | | |
| **Job Related Satisfaction** | | | | |
| Between Groups | 3 | 4.9845 | 4.20 | .006 |
| Within Groups | 3875 | 1.1871 | | |
| Total | 3879 | | | |
| **Perceived Productivity** | | | | |
| Between Groups | 3 | 37.4730 | 31.63 | .001 |
| Within Groups | 4201 | 1.1947 | | |
| Total | 4205 | | | |

*Table D-2.* Newman-Keuls Sequential Range Test for Number People You Directly Supervise

**General Organizational Climate**

| Response Option | | 1 | 2 | 3 |
|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 |
| 2 | 2 | 7.357* | | |
| 3 | 3 | 11.553* | 2.677 | |
| 4-7 | 4 | 14.440* | 5.691* | 3.323* |

**Job Related Satisfaction**

| Response Option | | 1 | 3 | 2 |
|---|---|---|---|---|
| | Group Number | 1 | 3 | 2 |
| 3 | 3 | 2.165 | | |
| 2 | 2 | 3.061 | .847 | |
| 4-7 | 4 | 4.278* | 1.902 | 1.030 |

**Perceived Productivity**

| Response Option | | 1 | 2 | 3 |
|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 |
| 2 | 2 | 3.882* | | |
| 3 | 3 | 9.995* | 4.379* | |
| 4-7 | 4 | 11.048* | 5.677* | 1.602 |

*p <.05.

*Perceived Productivity.* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated all pairs were significantly different *except* for response 3 (3 to 5 people) and the combined responses 4, 5, 6, and 7 (6 to 21 or more).

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## *APPENDIX E:* SUPERVISOR ACTUALLY WRITES PERFORMANCE REPORTS

The analysis of variance data based on whether the supervisor actually writes the performance reports are provided in Table E-1, and the Newman-Keuls Sequential Range Test results are presented in Table E-2.

*Table E-1.* **Analysis of Variance Summary Table for Whether Supervisor Writes Performance Reports**

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Between Groups | 1 | 145.8785 | 148.42 | .001 |
| Within Groups | 4097 | .9829 | | |
| Total | 4099 | | | |
| | | **Organizational Communications Climate** | | |
| Between Groups | 1 | 14.4293 | 14.07 | .001 |
| Within Groups | 4097 | 1.0259 | | |
| Total | 4099 | | | |
| | | **Job Related Satisfaction** | | |
| Between Groups | 1 | 156.4303 | 136.19 | .001 |
| Within Groups | 3869 | 1.1486 | | |
| Total | 3871 | | | |
| | | **Perceived Productivity** | | |
| Between Groups | 1 | 106.8759 | 90.25 | .001 |
| Within Groups | 4195 | 1.1843 | | |
| Total | 4197 | | | |

*Table E-2.* **Newman-Keuls Sequential Range Test for Whether Supervisor Actually Writes Performance Reports**

| | | |
|---|---|---|
| | **General Organizational Climate** | |
| Response Option | | 2 |
| | Group Number | 2 |
| 1 | 1 | 17.229* |
| | **Organizational Communications Climate** | |
| Response Option | | 2 |
| | Group Number | 2 |
| 1 | 1 | 5.304* |
| | **Job Related Satisfaction** | |
| Response Option | | 2 |
| | Group Number | 2 |
| 1 | 1 | 16.504* |
| | **Perceived Productivity** | |
| Response Option | | 2 |
| | Group Number | 2 |
| 1 | 1 | 13.435* |

*p <.05.

## *APPENDIX F:* SIZE OF WORK GROUP

The analysis of variance data for size of work group are provided in Table F-i, and the Newman-Keuls Sequential Range Test results are presented in Table F-2.

*General Organizational Climate (n = 3860).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between response 4 (as a large group team member) and all other response options.

*Organizational Communications Climate (n =3860).* The analysis of variance showed no significant main effect.

*Job Related Satisfaction (n =3647).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between all pairs of means except for responses 1 (alone) and 4 (as a large group team member).

*Table F-1.* Analysis of Variance Summary Table for Size of Work Group

| Source | df | MS | F | p |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Between Groups | 3 | 23.1531 | 23.07 | .001 |
| Within Groups | 3856 | 1.0036 | | |
| Total | 3860 | | | |
| **Organizational Communications Climate** | | | | |
| Between Groups | 3 | 1.7501 | 1.70 | .165 |
| Within Groups | 3856 | 1.0299 | | |
| Total | 3860 | | | |
| **Job Related Satisfaction** | | | | |
| Between Groups | 3 | 30.2389 | 26.21 | .001 |
| Within Groups | 3643 | 1.1536 | | |
| Total | 3647 | | | |
| **Perceived Productivity** | | | | |
| Between Groups | 3 | 24.8827 | 21.03 | .001 |
| Within Groups | 3955 | 1.1835 | | |
| Total | 3959 | | | |

*Table F-2.* Newman-Keuls Sequential Range Test for Work Group Size

**General Organizational Climate**

| Response Option | Group Number | 1 | 2 | 3 |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| 2 | 2 | .458 | | |
| 3 | 3 | .955 | .672 | |
| 4 | 4 | 8.881* | 10.653* | 9.682* |

**Job Related Satisfaction**

| Response Option | Group Number | 3 | 2 | 1 |
|---|---|---|---|---|
| | | 3 | 2 | 1 |
| 2 | 2 | 7.846* | | |
| 1 | 1 | 9.354* | 3.442* | |
| 4 | 4 | 11.083* | 4.471* | .448 |

**Perceived Productivity**

| Response Option | Group Number | 1 | 2 | 3 |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| 2 | 2 | .684 | | |
| 3 | 3 | 3.252 | 3.417* | |
| 4 | 4 | 8.888* | 10.431* | 7.094* |

*p <.05.

*Perceived Productivity (n =3959).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between response 4 (as a large group team member) and all other response options. Also, response 2 (with one or two people) differed significantly from response 3 (as a small group team member).

## *APPENDIX G:* STABILITY OF WORK HOURS

The analysis of variance data for stability of work hours are provided in Table G-1, and the Newman-Keuls Sequential Range Test results are presented in Table G-2.

*Perceived Productivity (n = 4205).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between response 3 (moderately stable) and all other response options. In addition, response 4 (slightly unstable) differed significantly from responses 1 (highly stable) and 2 (very stable).

*Table G-1.* Analysis of Variance Summary Table for Stability of Work Hours

| Source | df | MS | F | p |
|---|---|---|---|---|
| | **General Organizational Climate** | | | |
| Between Groups | 4 | 18.3148 | 18.26 | .001 |
| Within Groups | 4103 | 1.0031 | | |
| Total | 4108 | | | |
| | **Organizational Communications Climate** | | | |
| Between Groups | 4 | 3.6688 | 3.57 | .007 |
| Within Groups | 4103 | 1.0282 | | |
| Total | 4108 | | | |
| | **Job Related Satisfaction** | | | |
| Between Groups | 4 | 154.0627 | 149.26 | .001 |
| Within Groups | 3874 | 1.0322 | | |
| Total | 3879 | | | |
| | **Perceived Productivity** | | | |
| Between Groups | 4 | 10.9659 | 9.13 | .001 |
| Within Groups | 4200 | 1.2014 | | |
| Total | 4205 | | | |

*Table G-2.* Newman-Keuls Sequential Range Test for Stability of Work Hours

**General Organizational Climate**

| Response Option | Group Number | 3 | 5 | 4 | 1 |
|---|---|---|---|---|---|
| | | 3 | 5 | 4 | 1 |
| 5 | 5 | 1.119 | | | |
| 4 | 4 | 3.980* | 2.811* | | |
| 1 | 1 | 6.746* | 5.339* | 2.124 | |
| 2 | 2 | .10.310* | 8.857* | 5.739* | 4.531* |

**Organizational Communications Climate**

| Response Option | Group Number | 5 | 4 | 2 | 3 |
|---|---|---|---|---|---|
| | | 5 | 4 | 2 | 3 |
| 4 | 4 | .656 | | | |
| 2 | 2 | 2.454 | 1.735 | | |
| 3 | 3 | 3.081 | 2.469 | 1.142 | |
| 1 | 1 | 4.523* | 3.848* | 2.618 | .941 |

**Job Related Satisfaction**

| Response Option | Group Number | 5 | 4 | 3 | 2 |
|---|---|---|---|---|---|
| | | 5 | 4 | 3 | 2 |
| 4 | 4 | 5.010* | | | |
| 3 | 3 | 9.575* | 4.573* | | |
| 2 | 2 | 24.290* | 18.707* | 13.544* | |
| 1 | 1 | 27.638* | 22.085* | 16.942* | 4.173* |

**Perceived Productivity**

| Response Option | Group Number | 3 | 4 | 5 | 1 |
|---|---|---|---|---|---|
| | | 3 | 4 | 5 | 1 |
| 4 | 4 | 2.812* | | | |
| 5 | 5 | 4.368* | 1.595 | | |
| 1 | 1 | 7.141* | 3.833* | 1.899 | |
| 2 | 2 | 7.529* | 4.228* | 2.290 | .508 |

*p <.05.

## *APPENDIX H:* EXTENT THAT WORK GROUP MEETINGS ARE USED TO SOLVE PROBLEMS AND ESTABLISH GOALS AND OBJECTIVES

The analysis of variance data for the effect of group meetings are provided in Table H-1, and the significant Newman-Keuls Sequential Range Test results are presented in Table H-2.

Tests were significant for all pairs of means except for two criteria, each of which had one pair that was not significant. The nonsignificant differences were between Organizational Communications Climate response 2 (occasionally) and response 3 (about half the time); and between Job Related Satisfaction response 3 (about half the time) and response 4 (almost totally).

*Table H-1.* Analysis of Variance Summary Table for Extent to Which Group Meetings are Used to Solve Problems and Establish Goals and Orjectives

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Between Groups | 3 | 138.4499 | 150.78 | .001 |
| Within Groups | 4091 | .9182 | | |
| Total | 4095 | | | |
| | | **Organizational Communications Climate** | | |
| Between Groups | 3 | 22.7280 | 22.38 | .001 |
| Within Groups | 4091 | 1.0153 | | |
| Total | 4095 | | | |
| | | **Job Related Satisfaction** | | |
| Between Groups | 3 | 52.1367 | 45.29 | .001 |
| Within Groups | 3864 | 1.1512 | | |
| Total | 3879 | | | |
| | | **Perceived Productivity** | | |
| Between Groups | 3 | 118.6356 | 105.69 | .001 |
| Within Groups | 4188 | 1.1225 | | |
| Total | 4192 | | | |

*Table H-2.* Newman-Keuls Sequential Range Test for Extent to Which Group Meetings Used to Solve Problems and Establish Goals and Objectives

**General Organizational Climate**

| Response Option | | 1 | 2 | 3 |
|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 |
| 2 | 2 | 22.399* | | |
| 3 | 3 | 25.180* | 7.855 | |
| 4 | 4 | 26.415* | 11.051* | 3.674* |

**Organizational Communications Climate**

| Response Option | | 1 | 3 | 2 |
|---|---|---|---|---|
| | Group Number | 1 | 3 | 2 |
| 2 | 2 | 8.145 | | |
| 3 | 3 | 8.524* | 2.071 | |
| 4 | 4 | 10.970* | 5.638* | 3.324* |

**Job Related Satisfaction**

| Response Option | | 1 | 2 | 3 |
|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 |
| 2 | 2 | 12.902* | | |
| 3 | 3 | 13.389* | 3.157* | |
| 4 | 4 | 14.549* | 5.571* | 2.445 |

**Perceived Productivity**

| Response Option | | 1 | 2 | 3 |
|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 |
| 2 | 2 | 18.010* | | |
| 3 | 3 | 20.710* | 6.858* | |
| 4 | 4 | 22.476* | 10.322* | 3.793* |

*p <.05.

## *APPENDIX I:* WORK SCHEDULE

The analysis of variance data for work schedules are provided in Table I-1, and the Newman-Keuls Sequential Range Test results are presented in Table I-2.

*General Organizational Climate (n = 3849).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between the combined responses 2 and 3 (swing shift and night shift), and all other response options. Also, response option 5 (daily work) was significantly different from all other responses. Response 6 (crew schedule) also differed significantly from responses 2 and 3 combined, and response 4 (day and night shift).

*Organizational Communications Climate (n =3849).* The analysis of variance indicated a significant ($p < .01$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences existed between response 6 and the combined responses 2 and 3, and response 4.

*Table I-1.* **Analysis of Variance Summary Table for Work Schedule**

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Between Groups | 4 | 52.4056 | 54.36 | .001 |
| Within Groups | 3844 | .9641 | | |
| Total | 3849 | | | |
| | | **Organizational Communications Climate** | | |
| Between Groups | 4 | 3.2685 | 3.19 | .013 |
| Within Groups | 3844 | 1.0257 | | |
| Total | 3849 | | | |
| | | **Job Related Satisfaction** | | |
| Between Groups | 4 | 164.7165 | 164.38 | .001 |
| Within Groups | 3624 | 1.0021 | | |
| Total | 3629 | | | |
| | | **Perceived Productivity** | | |
| Between Groups | 4 | 20.4604 | 17.28 | .001 |
| Within Groups | 3937 | 1.1843 | | |
| Total | 3942 | | | |

*Table I-2.* **Newman-Keuls Sequential Range Test for Work Schedule**

**General Organizational Climate**

| Response Option | Group Number | 2-3 | 4 | 1 | 6 |
|---|---|---|---|---|---|
| | | 2 | 3 | 1 | 5 |
| 4 | 3 | 4.659* | | | |
| 1 | 1 | 7.674* | 2.277 | | |
| 6 | 5 | 8.978* | 4.012* | 2.311 | |
| 5 | 4 | 17.173* | 11.348* | 12.008* | 7.451* |

**Organizational Communications Climate**

| Response Option | Group Number | 4 | 2-3 | 1 | 5 |
|---|---|---|---|---|---|
| | | 3qc2 | 1 | 4 | |
| 2-3 | 2 | .334 | | | |
| 1 | 1 | 1.910 | 1.490 | | |
| 5 | 4 | 2.861 | 2.372 | .993 | |
| 6 | 5 | 4.326* | 3.908* | 3.100 | 2.734 |

**Job Related Satisfaction**

| Response Option | Group Number | 6 | 4 | 2-3 | 1 |
|---|---|---|---|---|---|
| | | 5 | 3 | 2 | 1 |
| 4 | 3 | 2.745 | | | |
| 2-3 | 2 | 2.728 | .007 | | |
| 1 | 1 | 11.551* | 7.269* | 7.188* | |
| 5 | 4 | 28.260* | 20.836* | 20.567* | 17.415* |

**Perceived Productivity**

| Response Option | Group Number | 2-3 | 4 | 6 | 1 |
|---|---|---|---|---|---|
| | | 2 | 3 | 5 | 1 |
| 4 | 3 | .911 | | | |
| 6 | 5 | 2.955 | 1.981 | | |
| 1 | 1 | 3.907* | 2.855 | .782 | |
| 5 | 4 | 8.710* | 7.580* | 5.978* | 6.080* |

*p <.05.

*Job Related Satisfaction (n =3629).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Test indicated that response 5 (daily work) response 1 (day shift work) differed significantly from all other response options.

*Perceived Productivity (n =3942).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences existed between responses 5 and all other response options. Also, response 1 and the combined responses 2 and 3 differed significantly from each other.

## *APPENDIX J:* DESCRIPTION OF CAREER INTENTIONS

The analysis of variance data for career intentions, in regard to the Air Force, are provided in Table J-1, and the Newman-Keuls Sequential Range Test results are presented in Table J-2.

*General Organizational Climate (n = 4093).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between all pairs of response means.

*Organizational Communications Climate (N =4093).* The analysis of variance indicated a significant main effect ($p < 01$). The Newman-Keuls Sequential Range Test indicated a significant difference only between response 1 (to continue in the Air Force) and response 5 (other).

*Job Related Satisfaction (n =3864).* The analysis of variance indicated significant ($p < .001$) main effects. The Newman-Keuls Sequential Range Test indicated significant differences between all response options except between response 2 (will most likely continue in the Air Force) and response 4 (planning to retire in the next 12 months).

*Table J-1.* Analysis of Variance Summary Table for Career Intentions
*(Air Force)*

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Between Groups | 4 | 117.5633 | 129.95 | .001 |
| Within Groups | 4088 | .9047 | | |
| Total | 4093 | | | |
| | | **Organizational Communications Climate** | | |
| Between Groups | 4 | 4.6296 | 4.50 | .01 |
| Within Groups | 4088 | 1.0279 | | |
| Total | 4093 | | | |
| | | **Job Related Satisfaction** | | |
| Between Groups | 4 | 114.9263 | 107.28 | .001 |
| Within Groups | 3859 | 1.0713 | | |
| Total | 3864 | | | |
| | | **Perceived Productivity** | | |
| Between Groups | 4 | 67.2693 | 58.94 | .001 |
| Within Groups | 4184 | 1.1412 | | |
| Total | 4189 | | | |

*Table J-2.* Newman-Keuls Sequential Range Test for Career Intentions

**General Organizational Climate**

| Response Option | | 5 | 3 | 2 | 4 |
|---|---|---|---|---|---|
| | Group Number | 5 | 3 | 2 | 4 |
| 3 | 3 | 7.532* | | | |
| 2 | 2 | 13.527* | 6.859* | | |
| 4 | 4 | 13.183* | 8.298* | 3.046* | |
| 1 | 1 | 30.119* | 21.129* | 10.498* | 4.056* |

**Organizational Communications Climate**

| Response Option | | 5 | 4 | 2 | 3 |
|---|---|---|---|---|---|
| | Group Number | 5 | 4 | 2 | 3 |
| 4 | 4 | .118 | | | |
| 2 | 2 | 1.529 | .939 | | |
| 3 | 3 | 2.900 | 1.729 | .988 | |
| 1 | 1 | 5.574* | 3.162 | 2.990 | 2.248 |

**Job Related Satisfaction**

| Response Option | | 5 | 3 | 2 | 4 |
|---|---|---|---|---|---|
| | Group Number | 5 | 3 | 2 | 4 |
| 3 | 3 | 4.317* | | | |
| 2 | 2 | 9.577* | 5.680* | | |
| 4 | 4 | 8.674* | 5.842* | 1.572 | |
| 1 | 1 | 26.635* | 21.224* | 12.078* | 6.771* |

**Perceived Productivity**

| Response Option | | 5 | 3 | 2 | 4 |
|---|---|---|---|---|---|
| | Group Number | 5 | 3 | 2 | 4 |
| 3 | 3 | 2.849* | | | |
| 2 | 2 | 7.120* | 4.576* | | |
| 4 | 4 | 8.547* | 6.672* | 3.093* | |
| 1 | 1 | 19.378* | 15.827* | 8.473* | 2.582 |

*$p < .05$.

*Perceived Productivity* ($n = 4189$). The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between all response pairs *except* between response 1 (to continue in the Air Force) and response 4 (planning to retire in the next 12 months).

## *APPENDIX K*: MAJOR COMMAND

The analysis of variance data for the effect of the major command (MAJCOM) to which the respondent was assigned are provided in Table K-1, and the Newman-Keuls Sequential Range Test results are presented in Table K-2. The MAJCOMs are labelled A to E to preserve their anonymity.

*General Organizational Climate (n =3901).* For the criterion of General Organizational Climate, the analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between command A and commands D and E, between command B and commands D and E, and between commands D and E.

*Organizational Communications Climate (n =3901).* The analysis of variance indicated a significant main effects ($p < 001$). The Newman-Keuls Sequential Range Test indicated significant differences between all command pairs except between commands D and E.

*Table K-1.* Analysis of Variance Summary Table for Major Command (MAJCOM)

| Source | df | MS | F | p |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Between Groups | 4 | 17.2258 | 17.07 | .001 |
| Within Groups | 3896 | 1.0089 | | |
| Total | 3901 | | | |
| **Organizational Communications Climate** | | | | |
| Between Groups | 4 | 18.9081 | 18.71 | .001 |
| Within Groups | 3896 | 1.0104 | | |
| Total | 3901 | | | |
| **Job Related Satisfaction** | | | | |
| Between Groups | 4 | 108.2592 | 102.84 | .001 |
| Within Groups | 3679 | 1.0527 | | |
| Total | 3684 | | | |
| **Perceived Productivity** | | | | |
| Between Groups | 4 | 10.0853 | 8.42 | .001 |
| Within Groups | 3989 | 1.1977 | | |
| Total | 3994 | | | |

*Table K-2.* Newman-Keuls Sequential Range Test for Major Command (MAJCOM)

**General Organizational Climate**

| Response Option | | D | E | B | A |
|---|---|---|---|---|---|
| | Group Number | 5 | 6 | 2 | 1 |
| E | 6 | 2.954* | | | |
| B | 2 | 8.463* | 8.283* | | |
| A | 1 | 8.094* | 7.457* | .404 | |
| C | 4 | 2.342 | 1.849 | .766 | .696 |

**Organizational Communications Climate**

| Response Option | | A | D | E | B |
|---|---|---|---|---|---|
| | Group Number | 1 | 5 | 6 | 2 |
| D | 5 | 5.634* | | | |
| E | 6 | 8.391* | .772 | | |
| B | 2 | 11.470* | 4.196* | 5.033* | |
| C | 4 | 5.348* | 4.182* | 4.086* | 3.421* |

**Job Related Satisfaction**

| Response Option | | D | C | E | B |
|---|---|---|---|---|---|
| | Group Number | 5 | 4 | 6 | 2 |
| C | 4 | 1.039 | | | |
| E | 6 | 10.478* | .642 | | |
| B | 2 | 21.660* | 2.739 | 17.294* | |
| A | 1 | 22.831* | 3.325 | 18.592* | 3.717* |

**Perceived Productivity**

| Response Option | | D | A | E | C |
|---|---|---|---|---|---|
| | Group Number | 5 | 1 | 6 | 4 |
| A | 1 | 3.483* | | | |
| E | 6 | 4.343* | .234 | | |
| C | 4 | .958 | .254 | .220 | |
| B | 2 | 7.837* | 4.433* | 5.545* | .495 |

*p <.05.

*Job Related Satisfaction (n =3684).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test was significant for all command pairs except that command C did not differ significantly from any other command.

*Perceived Productivity (n =3994).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between command D and commands A, B and E. Also, command B differed significantly from commands A, D and E.

## *APPENDIX L:* ORGANIZATIONAL LEVEL

The analysis of variance data for the organizational level of the respondents are provided in Table L-1, the Newman-Keuls Sequential Range Test results are presented in Table L-2. The organizational level codes are given in Table 2 of main text.

*General Organizational Climate (n =4108).* The Newman-Keuls Sequential Range Test indicated that for those levels tested (responses 2, 5, 6, 7 and 8) there were significant differences between all pairs, except for levels 5 and 8, which did not differ significantly from each other.

*Organizational Communications Climate (n =4108).* The Newman-Keuls Sequential Range Test indicated significant differences between all organizational levels except between levels 5 and 6; and between level 6 and level 7.

*Job Related Satisfaction (n =3879).* The Newman-Keuls Sequential Range Test indicated that significant differences existed between all organizational levels except between levels 5 and 6.

*Perceived Productivity (n =4205).* The Newman-Keuls Sequential Range Test indicated significant differences existed between all organizational levels except for levels 7 and 8.

*Table L-1.* **Analysis of Variance Summary Table for Organizational Level**

| Source | df | MS | F | P |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Between Groups | 7 | 29.1676 | 30.01 | .001 |
| Within Groups | 4100 | .9719 | | |
| Total | 4108 | | | |
| | | **Organizational Communications Climate** | | |
| Between Groups | 7 | 10.0091 | 9.86 | .001 |
| Within Groups | 4100 | 1.0154 | | |
| Total | 4108 | | | |
| | | **Job Related Satisfaction** | | |
| Between Groups | 6 | 80.0351 | 74.95 | .001 |
| Within Groups | 3872 | 1.0678 | | |
| Total | 3879 | | | |
| | | **Perceived Productivity** | | |
| Between Groups | 7 | 17.8208 | 15.06 | .001 |
| Within Groups | 4197 | 1.1830 | | |
| Total | 4205 | | | |

*Table L-2.* Newman-Keuls Sequential Range Test for Organizational Level

**General Organizational Climate**

| Response Option | Group Number | 7 | 6 | 5 | 8 |
|---|---|---|---|---|---|
| | | 4 | 3 | 2 | 5 |
| 6 | 3 | 7.802* | | | |
| 5 | 2 | 11.048* | 3.434* | | |
| 8 | 5 | 12.523* | 5.627* | 2.381 | |
| 2 | 1 | 14.073* | 9.323* | 6.849* | 4.858* |

**Organizational Communications Climate**

| Response Option | Group Number | 8 | 6 | 7 | 5 |
|---|---|---|---|---|---|
| | | 5 | 3 | 4 | 2 |
| 6 | 3 | 6.304* | | | |
| 7 | 4 | 7.434* | .174 | | |
| 5 | 2 | 8.064* | 2.473 | 2.824* | |
| 2 | 1 | 10.940* | 7.203* | 7.651* | 5.406* |

**Job Related Satisfaction**

| Response Option | Group Number | 7 | 5 | 6 | 8 |
|---|---|---|---|---|---|
| | | 4 | 2 | 3 | 5 |
| 5 | 2 | 13.563* | | | |
| 6 | 3 | 18.746* | 2.748 | | |
| 8 | 5 | 17.768* | 5.174* | 2.986* | |
| 2 | 1 | 19.061* | 10.061* | 8.526* | 5.835* |

**Perceived Productivity**

| Response Option | Group Number | 7 | 8 | 6 | 5 |
|---|---|---|---|---|---|
| | | 4 | 5 | 3 | 2 |
| 8 | 5 | .268 | | | |
| 6 | 3 | 6.041* | 3.789* | | |
| 5 | 2 | 9.057* | 6.177* | 3.021* | |
| 2 | 1 | 10.909* | 9.247* | 7.188* | 5.048* |

*p <.05.

## *APPENDIX M:* WORK GROUP CODES

The analysis of variance data for the four criteria are provided in Table M-1. The Newman-Keuls Sequential Range Tests involved eight work group levels. Discussing all significant pair combinations for the four criteria becomes rather awkward. Review of the Newman-Keuls Sequential Range Test results in Table M-2 provides all significant relationships. The work group codes are labeled in Table 3 in main text.

*Table M-1.* **Analysis of Variance Summary Table for Work Group Codes**

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Between Groups | 7 | 33.4959 | 34.73 | .001 |
| Within Groups | 4100 | .9645 | | |
| Total | 4108 | | | |
| | | **Organizational Communications Climate** | | |
| Between Groups | 7 | 24.5087 | 24.74 | .001 |
| Within Groups | 4100 | .9907 | | |
| Total | 4108 | | | |
| | | **Job Related Satisfaction** | | |
| Between Groups | 7 | 69.7137 | 65.39 | .001 |
| Within Groups | 3871 | 1.0661 | | |
| Total | 3879 | | | |
| | | **Perceived Productivity** | | |
| Between Groups | 7 | 21.3048 | 18.10 | .001 |
| Within Groups | 4197 | 1.1772 | | |
| Total | 4205 | | | |

*Table M-2.* **Newman-Keuls Sequential Range Test for Work Group Codes**

**General Organizational Climate**

| Response Option | | 4 | 5 | 3 | 6 | 2 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| | Group Number | 4 | 5 | 3 | 6 | 2 | 7 | 8 |
| 5 | 5 | .837 | | | | | | |
| 3 | 3 | 2.639 | 1.453 | | | | | |
| 6 | 6 | 4.842* | 3.119 | 1.598 | | | | |
| 2 | 2 | 12.700* | 8.701* | 6.983* | 5.474* | | | |
| 7 | 7 | 8.559* | 7.197* | 6.091* | 5.033* | 1.534 | | |
| 8 | 8 | 10.958* | 8.903* | 7.619* | 6.455* | 2.494 | .522 | |
| 1 | 1 | 17.329* | 12.489* | 10.780* | 9.456* | 4.554* | 1.355 | .873 |

**Organizational Communications Climate**

| Response Option | | 8 | 6 | 4 | 5 | 2 | 3 | 7 |
|---|---|---|---|---|---|---|---|---|
| | Group Number | 8 | 6 | 4 | 5 | 2 | 3 | 7 |
| 6 | 6 | 8.053* | | | | | | |
| 4 | 4 | 12.191* | 4.043* | | | | | |
| 5 | 5 | 11.658* | 4.567* | 1.720 | | | | |
| 2 | 2 | 14.735* | 7.972* | 5.848* | 2.838* | | | |
| 3 | 3 | 14.080* | 7.586* | 5.453* | 3.010 | .512 | | |
| 7 | 7 | 11.186* | 5.557* | 3.609 | 2.245 | .393 | .032 | |
| 1 | 1 | 15.531* | 9.097* | 7.307* | 4.107* | 1.523 | .847 | .571 |

**Job Related Satisfaction**

| Response Option | | 5 | 2 | 4 | 6 | 3 | 7 | 1 |
|---|---|---|---|---|---|---|---|---|
| | Group Number | 5 | 2 | 4 | 6 | 3 | 7 | 1 |
| 2 | 2 | 7.502* | | | | | | |
| 4 | 4 | 10.153* | 1.924 | | | | | |
| 6 | 6 | 10.758* | 4.306* | 3.253* | | | | |
| 3 | 3 | 14.495* | 8.529* | 8.053* | 3.943* | | | |
| 7 | 7 | 12.484* | 8.008* | 7.429* | 4.907* | 2.073 | | |
| 1 | 1 | 24.116* | 18.922* | 20.193* | 12.977* | 8.617* | 3.875* | |
| 8 | 8 | 18.923* | 14.289* | 14.175* | 10.376* | 7.105* | 3.741* | .527 |

**Perceived Productivity**

| Response Option | | 6 | 8 | 4 | 5 | 3 | 7 | 2 |
|---|---|---|---|---|---|---|---|---|
| | Group Number | 6 | 8 | 4 | 5 | 3 | 7 | 2 |
| 8 | 8 | 2.932* | | | | | | |
| 4 | 4 | 8.123* | 2.651 | | | | | |
| 5 | 5 | 6.491* | 2.369 | .111 | | | | |
| 3 | 3 | 8.685* | 4.193* | 2.891 | 2.224 | | | |
| 7 | 7 | 6.634* | 3.621 | 2.258 | 1.966 | .343 | | |
| 2 | 2 | 10.567* | 5.187* | 4.612* | 3.339 | .858 | .236 | |
| 1 | 1 | 14.496* | 8.471* | 9.859* | 7.433* | 4.985* | 3.170 | 4.687* |

*p <.05.

## *APPENDIX N:* HIGHEST EDUCATIONAL LEVEL OBTAINED (OFFICERS)

The analysis of variance data for the highest educational level obtained by the officers in this study are provided in Table N-1, and the significant Newman-Keuls Sequential Range Tests are presented in Table N-2.

*General Organizational Climate (n = 712).* The Newman-Keuls Sequential Range Test indicated significant differences between responses 4 (bachelor degree) and 5 (some graduate work); and between responses 5 (some graduate work) and 6 (master degree).

*Organizational Communications Climate (n = 712).* The Newman-Keuls Sequential Range Test indicated significant differences between response option 7 (doctoral degree), and responses 4 (bachelor degree), 5 (some graduate work) and 6 (master degree).

*Job Related Satisfaction (n = 686).* The Newman-Keuls Sequential Range Test indicated significant differences between response option 5 (some graduate work) and response 6 (master degree) and 7 (doctoral degree). Also, significant differences exist between response option 4 (bachelor degree) and responses 6 and 7.

*Table N-1.* Analysis of Variance Summary Table for Highest Educational Level Obtained (Officers)

| Source | df | MS | F | p |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Between Groups | 3 | 4.4061 | 5.11 | .001 |
| Within Groups | 708 | .8628 | | |
| Total | 712 | | | |
| **Organizational Communications Climate** | | | | |
| Between Groups | 3 | 6.0289 | 6.42 | .001 |
| Within Groups | 708 | .9388 | | |
| Total | 712 | | | |
| **Job Related Satisfaction** | | | | |
| Between Groups | 3 | 12.3096 | 8.80 | .001 |
| Within Groups | 682 | 1.3991 | | |
| Total | 686 | | | |
| **Perceived Productivity** | | | | |
| Between Groups | 3 | 8.9439 | 9.91 | .001 |
| Within Groups | 718 | .9025 | | |
| Total | 722 | | | |

*Table N-2.* Newman-Keuls Sequential Range Test for Educational Level (Officers)

**General Organizational Climate**

| Response Option | Group Number | 5 | 4 | 7 |
|---|---|---|---|---|
| | | 2 | 1 | 4 |
| 4 | 1 | 2.777* | | |
| 7 | 4 | 1.946 | .447 | |
| 6 | 3 | 5.499* | 2.996 | 1.076 |

**Organizational Communications Climate**

| Response Option | Group Number | 7 | 5 | 4 |
|---|---|---|---|---|
| | | 4 | 2 | 1 |
| 5 | 2 | 5.007* | | |
| 4 | 1 | 5.648* | .907 | |
| 6 | 3 | 6.137* | 1.784 | .965 |

**Job Related Satisfaction**

| Response Option | Group Number | 5 | 4 | 6 |
|---|---|---|---|---|
| | | 2 | 1 | 3 |
| 4 | 1 | 1.490 | | |
| 6 | 3 | 5.726* | 4.678* | |
| 7 | 4 | 5.015* | 4.326* | 1.962 |

**Perceived Productivity**

| Response Option | Group Number | 7 | 5 | 4 |
|---|---|---|---|---|
| | | 4 | 2 | 1 |
| 5 | 2 | 2.086 | | |
| 4 | 1 | 3.809* | 2.954* | |
| 6 | 3 | 5.731* | 6.350* | 3.786* |

*p <.05.

*Perceived Productivity (n = 722).* The Newman-Keuls Sequential Range Test indicated significant differences between response option 7 (doctoral degree) and responses 4 (bachelor degree) and 6 (master degree). Significant differences were obtained between response option 5 (some graduate work) and responses 4 and 6.

## *APPENDIX O:* HIGHEST LEVEL OF PROFESSIONAL MILITARY EDUCATION OBTAINED (OFFICERS)

The analysis of variance data for the highest level of professional military education obtained by officers are provided in Table O-1, and the Newman-Keuls Sequential Range Test results are presented in Table O-2.

*General Organizational Climate (n =699).* The Newman-Keuls Sequential Range Test indicated that all pairs of responses were statistically different *except* for responses 5 (Squadron Officers School) and 6 (intermediate service school).

*Organizational Communications Climate (n =699).* The Newman-Keuls Sequential Range Test indicated that response option 7 differed significantly from all other responses.

*Job Related Satisfaction (n =671).* The Newman-Keuls Sequential Range Test indicated that all response pairs significantly differed from each other *except* for response 0 (none or not applicable) and response 5 (Squadron Officers School).

*Table O-1.* **Analysis of Variance Summary Table for Highest Level of Professional Military Education (Officers)**

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Between Groups | 3 | 8.0641 | 9.64 | .001 |
| Within Groups | 695 | .8363 | | |
| Total | 699 | | | |
| | | **Organizational Communications Climate** | | |
| Between Groups | 3 | 3.7260 | 3.90 | .009 |
| Within Groups | 695 | .9546 | | |
| Total | 699 | | | |
| | | **Job Related Satisfaction** | | |
| Between Groups | 3 | 21.7499 | 16.07 | .001 |
| Within Groups | 667 | 1.3535 | | |
| Total | 671 | | | |
| | | **Perceived Productivity** | | |
| Between Groups | 3 | 9.0518 | 10.13 | .001 |
| Within Groups | 700 | .8938 | | |
| Total | 704 | | | |

*Table O-2.* Newman-Keuls Sequential Range Test for Professional Military Education (Officers)

**General Organizational Climate**

| Response Option | | 0 | 5 | 6 |
|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 |
| 5 | 2 | 2.990* | | |
| 6 | 3 | 4.248 | 2.055 | |
| 7 | 4 | 7.320* | 5.623* | 2.173* |

**Organizational Communications Climate**

| Response Option | | 0 | 5 | 6 |
|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 |
| 5 | 2 | .922 | | |
| 6 | 3 | 1.515 | .867 | |
| 7 | 4 | 4.532* | 4.285* | 2.972* |

**Job Related Satisfaction**

| Response Option | | 0 | 5 | 6 |
|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 |
| 5 | 2 | 2.132 | | |
| 6 | 3 | 5.330* | 4.060* | |
| 7 | 4 | 8.824* | 8.007* | 3.607* |

**Perceived Productivity**

| Response Option | | 0 | 5 | 6 |
|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 |
| 5 | 2 | 2.325 | | |
| 6 | 3 | 5.213* | 3.776* | |
| 7 | 4 | 6.818* | 5.626* | 1.748 |

*p <.05.

*Perceived Productivity (n = 704).* The Newman-Keuls Sequential Range Test indicated that all response pairs significantly differed *except* for responses 0 and 5; and responses 6 and 7.

## *APPENDIX P:* HIGHEST EDUCATIONAL LEVEL OBTAINED (AIRMEN)

The analysis of variance data for the highest educational level obtained by airmen are provided in Table P-1 and the Newman-Keuls Sequential Range Test results are presented in Table P-2.

*General Organizational Climate (n = 2702).* The analysis of variance indicated a significant main effect ($p < .001$). The Newman-Keuls Sequential Range Test indicated significant differences between responses 2 (high school graduate or GED) and 3 (some college work).

*Organizational Communications Climate (n = 2702).* The main effect was not significant.

*Job Related Satisfaction (n =2558).* The analysis of variance indicated a significant ($p < .005$) main effect. The Newman-Keuls Sequential Range Test indicated a significant difference existed between response 2 (high school graduate or GED) and 3 (some college work); and between response 2 and the pooled response option 4 and 5 (bachelor's degree and some graduate work).

*Perceived Productivity (n =2786).* The main effect was not significant.

*Table P-1.* Analysis of Variance Summary Table for Highest Educational Level Obtained (Airmen)

| Source | df | MS | F | p |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Between Groups | 3 | 5.4939 | 5.40 | .001 |
| Within Groups | 2698 | 1.0166 | | |
| Total | 2702 | | | |
| **Organizational Communications Climate** | | | | |
| Between Groups | 3 | 1.9172 | 1.92 | .125 |
| Within Groups | 2698 | 1.0009 | | |
| Total | 2702 | | | |
| **Job Related Satisfaction** | | | | |
| Between Groups | 3 | 5.0926 | 4.69 | .003 |
| Within Groups | 2554 | 1.0861 | | |
| Total | 2558 | | | |
| **Perceived Productivity** | | | | |
| Between Groups | 3 | 2.0089 | 1.63 | .181 |
| Within Groups | 2782 | 1.2333 | | |
| Total | 2786 | | | |

*Table P-2.* **Newman-Keuls Sequential Range Test for Educational Level (Airmen)**

**General Organizational Climate**

| Response Option | | 2 | 1 | 3 |
|---|---|---|---|---|
| | Group Number | 2 | 1 | 3 |
| 1 | 1 | .909 | | |
| 3 | 3 | 4.940* | .034 | |
| 4-5 | 4 | 3.593 | .928 | 1.851 |

**Job Related Satisfaction**

| Response Option | | 2 | 3 | 4-5 |
|---|---|---|---|---|
| | Group Number | 2 | 3 | 4 |
| 3 | 3 | 4.168* | | |
| 4-5 | 4 | 3.579* | 2.042 | |
| 1 | 1 | 1.949 | 1.182 | .142 |

*p <.05.

## *APPENDIX Q:* HIGHEST LEVEL OF PROFESSIONAL MILITARY EDUCATION OBTAINED (AIRMEN)

The analysis of variance data for the highest level of professional military education obtained by airmen are provided in Table Q-1, the Newman-Keuls Sequential Range Test results are presented in Table Q-2.

*General Organizational Climate (n = 2700).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences existed between all response pairs except between responses 0 and 1.

*Organizational Communications Climate (n = 2700).* The main effect was not significant.

*Job Related Satisfaction (n =2555).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between all response pairs *except* between responses 0 and 1.

*Perceived Productivity (n =2784).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between all response pairs *except* between responses 0 and 1; and between responses 3 and 4.

*Table Q-1.* Analysis of Variance Summary Table for Highest Level of Professional Military Education (Airmen)

| Source | df | MS | F | p |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Between Groups | 4 | 54.9249 | 58.33 | .001 |
| Within Groups | 2695 | .9417 | | |
| Total | 2700 | | | |
| **Organizational Communications Climate** | | | | |
| Between Groups | 4 | 1.9579 | 1.95 | .099 |
| Within Groups | 2695 | 1.0025 | | |
| Total | 2700 | | | |
| **Job Related Satisfaction** | | | | |
| Between Groups | 4 | 37.7929 | 36.57 | .001 |
| Within Groups | 2550 | 1.0333 | | |
| Total | 2555 | | | |
| **Perceived Productivity** | | | | |
| Between Groups | 4 | 27.5922 | 22.99 | .001 |
| Within Groups | 2779 | 1.2003 | | |
| Total | 2784 | | | |

*Table Q-2.* **Newman-Keuls Sequential Range Test for Professional Military Education (Airmen)**

**General Organizational Climate**

| Response Option | | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 | 4 |
| 1 | 2 | 2.048 | | | |
| 2 | 3 | 9.961* | 7.550* | | |
| 3 | 4 | 14.587* | 12.503* | 6.034* | |
| 4 | 5 | 16.358* | 14.718* | 9.418* | 4.067* |

**Job Related Satisfaction**

| Response Option | | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 | 4 |
| 1 | 2 | .479 | | | |
| 2 | 3 | 3.555* | 2.912* | | |
| 3 | 4 | 10.549* | 9.752* | 7.052* | |

**Perceived Productivity**

| Response Option | | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|
| | Group Number | 1 | 2 | 3 | 4 |
| 1 | 2 | 1.451 | | | |
| 2 | 3 | 4.831* | 3.273* | | |
| 3 | 4 | 10.001* | 8.565* | 5.660* | |
| 4 | 5 | 9.995* | 8.890* | 6.533* | 1.691 |

*$p < .05$

## *APPENDIX R*: HIGHEST EDUCATIONAL LEVEL OBTAINED (CIVILIANS)

The analysis of variance data for the highest educational level obtained by civilians are provided in Table R-1, and the Newman-Keuls Sequential Range Test results are presented in Table R-2.

*General Organizational Climate (n =620).* The analysis of variance indicated a significant ($p < .005$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences existed between response 3 (some college) and the pooled responses 5, 6, and 7 (some graduate work—doctoral degree).

*Organizational Communications Climate (n =620).* The analysis of variance indicated a significant ($p < .001$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences existed between the pooled responses 5, 6, and 7 and all other responses. Also, response option 2 (high school or GED) differed significantly from response 3.

*Job Related Satisfaction (n =571).* The main effect was not significant.

*Perceived Productivity (n =624).* The analysis of variance indicated a significant ($p < .01$) main effect. The Newman-Keuls Sequential Range Test indicated significant differences between the pooled responses 5, 6 and 7 and all other responses.

*Table R-1.* **Analysis of Variance Summary Table for Highest Educational Level Obtained (Civilians)**

| Source | df | MS | F | p |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Between Groups | 3 | 3.5689 | 4.30 | .005 |
| Within Groups | 616 | .9299 | | |
| Total | 620 | | | |
| **Organizational Communications Climate** | | | | |
| Between Groups | 3 | 13.6432 | 11.68 | .001 |
| Within Groups | 616 | 1.1676 | | |
| Total | 620 | | | |
| **Job Related Satisfaction** | | | | |
| Between Groups | 3 | .9751 | 1.28 | .281 |
| Within Groups | 567 | .7633 | | |
| Total | 571 | | | |
| **Perceived Productivity** | | | | |
| Between Groups | 3 | 5.0503 | 4.15 | .006 |
| Within Groups | 620 | 1.2174 | | |
| Total | 624 | | | |

*Table R-2.* Newman-Keuls Sequential Range Test for Educational Level (Civilians)

**General Organizational Climate**

| Response Option | | 3 | 2 | 4 |
|---|---|---|---|---|
| | Group Number | 2 | 1 | 3 |
| 2 | 1 | 2.076 | | |
| 4 | 3 | 1.692 | .326 | |
| 5-7 | | 5.046* | 3.230 | 2.105 |

**Organizational Communications Climate**

| Response Option | | 5-7 | 3 | 4 |
|---|---|---|---|---|
| | Group Number | 4 | 2 | 3 |
| 3 | 2 | 5.703* | | |
| 4 | 3 | 5.900* | 2.072 | |
| 2 | 1 | 8.058* | 3.329* | .100 |

**Perceived Productivity**

| Response Option | | 5-7 | 3 | 2 |
|---|---|---|---|---|
| | Group Number | 4 | 2 | 1 |
| 3 | 2 | 3.869* | | |
| 2 | 1 | 4.723* | 1.321 | |
| 4 | 3 | 3.669* | 1.065 | .212 |

*p <.05.

## *APPENDIX S:* ANALYSIS OF CLASSIFICATION BY GRADE

The analysis of variance data for classification by grade are provided in Table S-1, the simple main effects are summarized in Table S-2, and the Newman-Keuls Sequential Range Test results are presented in Table S-3.

*General Organizational Climate (n =4107).* The analysis of variance indicated significant ($p < .001$) main effects for classification (C1) and grade (G) and the interaction effect (C1XG). The test for simple main effects indicated that for classification (C1) all levels of grade (G) were significant. Also, for grade (G), all levels of classification (C1) were significant. The Newman-Kuels Sequential Range Test indicated that grade (G) for officers ($c1_1$) had significantly different means between group $g_4$ and groups $g_2$ and $g_3$. For grade (G) for airmen ($c1_2$), there were significant differences for all grade levels, except $g_3$ and $g_4$ which did not significantly differ. Grade (G) for civilians ($c1_3$) had significantly different means between grade level $g_2$ and levels $g_3$ and $g_4$. The Newman-Keuls Sequential Range Test for classification (C1) at grade level $g_1$ indicated significant differences existed between classification level $c1_2$ and classification levels $c1_1$ and $c1_3$. For classification (C1) at grade level $g_2$, all classification level mean pairs differed significantly from each other. Classification (C1) at grade level $g_3$ and at level $g_4$ had significant differences for both levels, between classification $c1_1$ and classifications $c1_2$ and $c1_3$.

*Table S-1.* **Analysis of Variance Summary Table for Classification (C1) by Grade (G)**

| Source | df | MS | F | p |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Classification (C1) | 2 | 22.1131 | 24.7505 | .001 |
| Grade (G) | 3 | 12.8914 | 14.4289 | .001 |
| Classification x Grade (C1 x G) | 6 | 10.2169 | 11.4355 | .001 |
| Within Cell | 4095 | .8934 | | |
| **Organizational Communications Climate** | | | | |
| Classification (C1) | 2 | .6214 | .6077 | .545 |
| Grade (G) | 3 | 2.8593 | 2.7959 | .039 |
| Classification x Grade (C1 x G) | 6 | 5.9136 | 5.7825 | .001 |
| Within Cell | 4095 | 1.0227 | | |
| **Job Related Satisfaction** | | | | |
| Classification (C1) | 2 | 46.1965 | 44.1957 | .001 |
| Grade (G) | 3 | 15.5927 | 14.9173 | .001 |
| Classification x Grade (C1 x G) | 6 | 17.6426 | 16.8785 | .001 |
| Within Cell | 3867 | 1.0453 | | |
| **Perceived Productivity** | | | | |
| Classification (C1) | 2 | 12.5764 | 11.0065 | .001 |
| Grade (G) | 3 | 5.9425 | 5.2007 | .001 |
| Classification x Grade (C1 x G) | 6 | 7.9391 | 6.9481 | .001 |
| Within Cell | 1192 | 1.1426 | | |

*Table S-2.* **Simple Main Effects Summary Table for Classification (Cl) by Grade (G)**

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Cl at $g_1$ | 2 | 58.548 | 65.534 | .001 |
| Cl at $g_2$ | 2 | 88.358 | 98.901 | .001 |
| Cl at $g_3$ | 2 | 5.549 | 6.211 | .002 |
| Cl at $g_4$ | 2 | 2.809 | 3.144 | .043 |
| Within Cell | 4095 | .893 | | |
| G at $cl_1$ | 3 | 16.468 | 18.432 | .001 |
| G at $cl_2$ | 3 | 76.356 | 85.467 | .001 |
| G at $cl_3$ | 3 | 9.823 | 10.995 | .001 |
| Within Cell | 4095 | .893 | | |
| | | **Organizational Communications Climate** | | |
| Cl at $g_1$ | 2 | 4.318 | 4.222 | .015 |
| Cl at $g_2$ | 2 | 9.121 | 8.919 | .001 |
| Cl at $g_3$ | 2 | 1.153 | 1.128 | .324 |
| Cl at $g_4$ | 2 | 3.504 | 3.426 | .033 |
| Within Cell | 4095 | 1.023 | | |
| G at $cl_1$ | 3 | 4.735 | 4.630 | .003 |
| G at $cl_2$ | 3 | 6.355 | 6.214 | .001 |
| G at $cl_3$ | 3 | 3.134 | 3.064 | .027 |
| Within Cell | 4095 | .893 | | |
| | | **Job Related Satisfaction** | | |
| Cl at $g_1$ | 2 | 5.844 | 5.591 | .004 |
| Cl at $g_2$ | 2 | 90.404 | 90.313 | .001 |
| Cl at $g_3$ | 2 | 10.211 | 9.768 | .001 |
| Cl at $g_4$ | 2 | 23.744 | 22.715 | .001 |
| Within Cell | 3867 | 1.045 | | |
| G at $cl_1$ | 3 | 35.477 | 33.940 | .001 |
| G at $cl_2$ | 3 | 43.997 | 42.090 | .001 |
| G at $cl_3$ | 3 | 1.820 | 1.741 | .157 |
| Within Cell | 3867 | 1.045 | | |
| | | **Perceived Productivity** | | |
| Cl at $g_1$ | 2 | 20.028 | 17.528 | .001 |
| Cl at $g_2$ | 2 | 49.450 | 43.279 | .001 |
| Cl at $g_3$ | 2 | 1.173 | 1.027 | .358 |
| Cl at $g_4$ | 2 | 2.193 | 1.919 | .147 |
| Within Cell | 4192 | 1.143 | | |
| G at $cl_1$ | 3 | 11.345 | 9.929 | .001 |
| G at $cl_2$ | 3 | 51.482 | 45.057 | .001 |
| G at $cl_3$ | 3 | 2.924 | 2.559 | .053 |
| Within Cell | 4192 | 1.143 | | |

Cl =Classification with $Cl_1$ =officer; $Cl_2$ =airmen; $Cl_3$ =civilian.
G =Grade with $G_1$ =1-3; $G_2$ =4-5; $G_3$ 6-7; $G_4$ =8+.

*Table S-3.* Newman-Keuls Sequential Range Test for Classification (Cl) by Grade (G)

General Organizational Climate

Classification at Grade Level 1

| Response Option | Group Number ($Cl_i$) | 2 | 3-6 |
|---|---|---|---|
| | | 2 | 3 |
| 3-6 | 3 | 4.4345* | |
| 1 | 1 | 15.9829* | 1.0121 |

Classification at Grade Level 2

| Response Option | Group Number ($Cl_i$) | 2 | 3-5 |
|---|---|---|---|
| | | 2 | 3 |
| 3-6 | 3 | 3.3721* | |
| 1 | 1 | 19.8777* | 11.6587* |

Classification at Grade Level 3

| Response Option | Group Number ($Cl_i$) | 3-6 | 2 |
|---|---|---|---|
| | | 3 | 2 |
| 2 | 2 | .9608 | |
| 1 | 1 | 4.8342* | 4.7354* |

Classification at Grade Level 4

| Response Option | Group Number ($Cl_i$) | 1 | 2 |
|---|---|---|---|
| | | 1 | 2 |
| 2 | 2 | 3.0319* | |
| 3-6 | 3 | 3.5447* | .7210 |

Grade at Classification Level 1

| Response Option | Group Number ($G_i$) | 4-7 | 1 | 2 |
|---|---|---|---|---|
| | | 4 | 1 | 2 |
| 1 | 1 | 1.9564 | | |
| 2 | 2 | 5.8015* | 8.9861* | |
| 3 | 3 | 5.3577* | 5.5982* | .9162 |

Grade at Classification Level 2

| Response Option | Group Number ($G_i$) | 1 | 2 | 3 |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| 2 | 2 | 3.6405* | | |
| 3 | 3 | 19.2511* | 17.0470* | |
| 4-7 | 4 | 13.2158* | 11.5478* | .9760 |

Grade at Classification Level 3

| Response Option | Group Number ($G_i$) | 2 | 1 | 3 |
|---|---|---|---|---|
| | | 2 | 1 | 3 |
| 1 | 1 | 1.6390 | | |
| 3 | 3 | 4.5222* | 1.2170 | |
| 4-7 | 4 | 8.0206* | 2.7457 | 2.4679 |

Table S-3 (*Continued*)

**Organizational Communications Climate**

**Classification at Grade Level 1**

| Response Option | Group Number ($G_i$) | 1<br>1 | 2<br>2 |
|---|---|---|---|
| 2 | 2 | 2.7293 | |
| 3-6 | 3 | 3.5989* | 2.7312 |

**Classification at Grade Level 2**

| Response Option | Group Number ($Cl_i$) | 2<br>2 | 3-6<br>3 |
|---|---|---|---|
| 3-6 | 3 | 1.5071 | |
| 1 | 1 | 5.9309* | 3.0793* |

**Classification at Grade Level 4**

| Response Option | Group Number ($Cl_i$) | 1<br>1 | 3-6<br>3 |
|---|---|---|---|
| 3-6 | 3 | 1.4755 | |
| 2 | 2 | 2.9531 | 3.0910* |

**Grade at Classification Level 1**

| Response Option | Group Number ($G_i$) | 4-7<br>4 | 1<br>1 | 3<br>3 |
|---|---|---|---|---|
| 1 | 1 | 2.1129 | | |
| 3 | 3 | 2.7468 | 1.6055 | |
| 2 | 2 | 3.9400* | 4.3696* | .6177 |

**Grade at Classification Level 2**

| Response Option | Group Number ($G_i$) | 2<br>2 | 3<br>3 | 1<br>1 |
|---|---|---|---|---|
| 3 | 3 | .2630 | | |
| 1 | 1 | 5.3676* | 4.0961* | |
| 4-7 | 4 | 3.1806 | 2.8237 | .3727 |

**Grade at Classification Level 3**

| Response Option | Group Number ($G_i$) | 4-7<br>4 | 3<br>3 | 2<br>2 |
|---|---|---|---|---|
| 3 | 3 | 1.2270 | | |
| 2 | 2 | 1.6298 | .2798 | |
| 1 | 1 | 4.1959* | 3.2629 | 3.1377* |

**Job Related Satisfaction**

**Classification at Grade Level 1**

| Response Option | Group Number ($Cl_i$) | 1<br>1 | 2<br>2 |
|---|---|---|---|
| 2 | 2 | 1.6013 | |
| 3-6 | 3 | 4.6844* | 4.2435* |

Table S-3 (*Continued*)

**Job Related Satisfaction**

**Classification at Grade Level 2**

| Response Option | Group Number ($Cl_i$) | 2<br>2 | 1<br>1 |
|---|---|---|---|
| 1 | 1 | 13.1555* | |
| 3-6 | 3 | 15.3924* | 2.8574* |

**Classification at Grade Level 3**

| Response Option | Group Number ($Cl_i$) | 2<br>2 | 1<br>1 |
|---|---|---|---|
| 1 | 1 | 3.0914* | |
| 3-6 | 3 | 5.7711* | .3707 |

**Classification at Grade Level 4**

| Response Option | Group Number ($Cl_i$) | 1<br>1 | 2<br>2 |
|---|---|---|---|
| 2 | 2 | 5.1647* | |
| 3-6 | 3 | 8.3845* | 5.9401* |

**Grade at Classification Level 1**

| Response Option | Group Number ($G_i$) | 4-7<br>4 | 1<br>1 | 2<br>2 |
|---|---|---|---|---|
| 1 | 1 | .9746 | | |
| 2 | 2 | 6.3136* | 12.6751* | |
| 3 | 3 | 5.9721* | 7.7666* | 1.1292 |

**Grade at Classification Level 2**

| Response Option | Group Number ($G_i$) | 2<br>2 | 1<br>1 | 3<br>3 |
|---|---|---|---|---|
| 1 | 1 | .6235 | | |
| 3 | 3 | 13.0988* | 12.0089* | |
| 4-7 | 4 | 9.3017* | 8.8093* | 1.0669 |

**Perceived Productivity**

**Classification at Grade Level 1**

| Response Option | Group Number ($Cl_i$) | 2<br>2 | 1<br>1 |
|---|---|---|---|
| 1 | 1 | 7.5050* | |
| 3-6 | 3 | 4.5234* | 2.0404 |

**Classification at Grade Level 2**

| Response Option | Group Number ($Cl_i$) | 2<br>2 | 3-6<br>3 |
|---|---|---|---|
| 3-6 | 3 | 4.2412* | |
| 1 | 1 | 12.9094* | 6.0614* |

Table S-3 (*Continued*)

**Perceived Productivity**

**Grade at Classification Level 1**

| Response Option | Group Number ($G_i$) | 4-7<br>4 | 1<br>1 | 2<br>2 |
|---|---|---|---|---|
| 1 | 1 | .8715 | | |
| 2 | 2 | 3.9074* | 6.9451* | |
| 3 | 3 | 3.2689 | 3.7729* | .1407 |

**Grade at Classification Level 2**

| Response Option | Group Number ($G_i$) | 1<br>1 | 2<br>2 | 4-7<br>4 |
|---|---|---|---|---|
| 2 | 2 | .7263 | | |
| 4-7 | 4 | 6.9120* | 6.6634* | |
| 3 | 3 | 14.1795* | 14.2651* | 2.1067 |

**Grade at Classification Level 3**

| Response Option | Group Number ($G_i$) | 2<br>2 | 3<br>3 | 4-7<br>4 |
|---|---|---|---|---|
| 3 | 3 | 2.6125 | | |
| 4-7 | 4 | 3.7446* | .5671 | |
| 1 | 1 | 2.1804 | .5786 | .2930 |

Note: — Only those factor levels having significant simple main effects had Newman-Keuls Sequential Range Tests performed.

*$p < .05$.

C1 =Classification with $C1_1$ =officer; $C1_2$ =airmen; $C1_3$ =civilian.

G =Grade with $G_1$ =1-3; $G_2$ =4-5; $G_3$ =6-7; $G_4$ =8+.

*Organizational Communications Climate (n =4107).* The analysis of variance indicated significant main effects for grade (G) ($p < .05$) and for the interaction (C1XG) ($p < .001$). Tests for simple main effects indicated that for classification (C1) all levels of grade (G) were significant except for level $g_3$. For grade (G) all levels of classification (C1) were significant. The Newman-Keuls Sequential Range Test indicated for grade at classification level $c1_1$ significant differences between grade level $g_2$ and grade levels $g_1$ and $g_4$. For grade at classification level $c1_2$, $g_1$ differed significantly from $g_2$ and $g_3$. Grade at classification level $c1_3$ indicated significant differences between $g_1$ and grades $g_2$ and $g_4$.

The Newman-Keuls Sequential Range Test for classification (C1) at grade level $g_1$ indicated classification level $c1_1$ differed significantly from level $c1_3$. For classification at $g_2$, there were significant differences indicated between classification level $c1_1$ and levels $c1_2$ and $c1_3$. On the other hand, for classification at grade level $g_4$, the only significant difference was between classification $c1_2$ and $c1_3$.

*Job Related Satisfaction (n =3879).* The analysis of variance indicated significant main effects for classification and grade, as well as a significant interaction (C1XG) ($p < .001$). Tests for simple main effects indicated that for classification (C1) all levels of grade (G) were significant. Also for grade (G), all classification (C1) were significant, except for $c1_3$. The Newman-Keuls Sequential Range Test indicated for classification at $g_1$ significant differences for classification level $c1_3$ and classification levels $c1_1$ and $c1_2$. For classification at $g_2$, all grade levels differed significantly from each other. Classification at $g_3$ had significantly differing means for classification level $c1_2$ and levels $c1_1$ and $c1_3$, while classification at $g_4$ had all levels of classification differing significantly from each other.

The Newman-Keuls Sequential Range Test for grade at $cl_1$ indicated significant differences between grade levels $g_1$ and levels $g_2$ and $g_3$, as well as between grade level $g_4$ and levels $g_2$ and $g_3$. For grade at level $cl_2$, significant differences were found between grade level $g_1$ and levels $g_3$ and $g_4$; and between grade level $g_2$ and levels $g_3$ and $g_4$.

*Perceived Productivity ($n = 4204$).* The analysis of variance indicated significant main effects for classification and grade and a significant interaction effect ($p < .001$). Tests for simple main effects indicated for classification (Cl) grade levels $g_1$ and $g_2$ were significant, and for grade (G) all classification levels were significant. The Newman-Keuls Sequential Range Test for classification at $g_1$ indicated classification level $cl_2$ differed significantly from groups $cl_1$ and $cl_3$. For classification at $g_2$, there were significant differences between all group means.

The Newman-Keuls Sequential Range Test for grade at $cl_1$ indicated that grade level $g_2$ differed significantly from $g_4$ and that $g_1$ differed from grade levels $g_2$ and $g_3$. For grade at $cl_2$, grade level $g_1$ differed significantly from $g_3$ and $g_4$, and grade level $g_2$ also significantly differed from $g_3$ and $g_4$. On the other hand, grade at $cl_3$ had only one pair of means, $g_2$ and $g_4$, which significantly differed from each other.

## *APPENDIX T:* ANALYSIS OF CLASSIFICATION BY RACE

The analysis of variance data are provided in Table T-1, the simple main effects are summarized in Table T-2, and the Newman-Keuls Sequential Range Test results are presented in Table T-3.

*General Organizational Climate (n =4099).* The analysis of variance indicated that tests for main effects for classification (C1) and race (Ra) were significant beyond the .001 level for both factors. Test for interaction (C1XRa) was significant ($p < .005$). Tests for simple main effects associated with the classification factor indicated that classification was significantly different for race level $ra_3$ (white). The simple main effects test for race was significantly different for race at classification levels $c1_1$ (officers) and $c1_3$ (civilians). The Newman-Keuls Sequential Range Test indicated that classification at $ra_3$ (white) had differences for classification group $c1_2$ (airmen) which differed significantly from classification groups $c1_1$ (officers) and $c1_3$ (civilians).

The Newman-Keuls Sequential Range Test for race indicated that race at classification level $c1_1$ (officers) and race level $ra_1$ (other) differed significantly from the other race groups ($ra_2$—black and $ra_3$—white). For race at classification level $c1_3$ (civilians), race group $ra_1$ (other) differed significantly from group $ra_3$ (white).

*Table T-1.* **Analysis of Variance Summary Table for Classification (Cl) by Race (Ra)**

| Source | df | MS | F | P |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Classification (C1) | 2 | 12.2027 | 12.7085 | .001 |
| Race (Ra) | 2 | 11.3680 | 11.8392 | .001 |
| Classification x Race (C1 x Ra) | 4 | 3.5381 | 3.6847 | .005 |
| Within Cell | 4090 | .9602 | | |
| **Organizational Communications Climate** | | | | |
| Classification (C1) | 2 | 1.2258 | 1.1902 | .304 |
| Race (Ra) | 2 | 1.1614 | 1.1278 | .324 |
| Classification x Race (C1 x Ra) | 4 | .9395 | .9123 | .456 |
| Within Cell | 4090 | 1.0299 | | |
| **Job Related Satisfaction** | | | | |
| Classification (C1) | 2 | 36.4346 | 33.0396 | .001 |
| Race (Ra) | 2 | 4.6401 | 4.2078 | .015 |
| Classification x Race (C1 x Ra) | 4 | 4.6077 | 4.1783 | .002 |
| Within Cell | 3860 | 1.1028 | | |
| **Perceived Productivity** | | | | |
| Classification (C1) | 2 | 3.6849 | 3.1230 | .044 |
| Race (Ra) | 2 | 13.3160 | 11.2856 | .001 |
| Classification x Race (C1 x Ra) | 4 | 5.1915 | 4.3999 | .001 |
| Within Cell | 4183 | 1.1799 | | |

*Table T-2.* **Simple Main Effects Summary Table for Classification (Cl) by Race (Ra)**

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| Cl at $ra_1$ | 2 | 2.527 | 2.632 | .072 |
| Cl at $ra_2$ | 2 | 2.278 | 2.372 | .093 |
| Cl at $ra_3$ | 2 | 107.433 | 111.886 | .001 |
| Within Cell | 4090 | .960 | | |
| Ra at $cl_1$ | 2 | 6.767 | 7.047 | .001 |
| Ra at $cl_2$ | 2 | 1.457 | 1.518 | .219 |
| Ra at $cl_3$ | 2 | 4.577 | 4.766 | .009 |
| Within Cell | 4090 | .960 | | |
| | | **Organizational Communications Climate** | | |
| Cl at $ra_1$ | 2 | .968 | .940 | .391 |
| Cl at $ra_2$ | 2 | .666 | .646 | .524 |
| Cl at $ra_3$ | 2 | 1.530 | 1.485 | .227 |
| Within Cell | 4090 | 1.030 | | |
| Ra at $cl_1$ | 2 | .139 | .135 | .874 |
| Ra at $cl_2$ | 2 | 2.433 | 2.362 | .094 |
| Ra at $cl_3$ | 2 | 2.124 | 2.063 | .127 |
| Within Cell | 4090 | 1.030 | | |
| | | **Job Related Satisfaction** | | |
| Cl at $ra_1$ | 2 | 10.191 | 9.241 | .001 |
| Cl at $ra_2$ | 2 | 2.563 | 2.324 | .098 |
| Cl at $ra_3$ | 2 | 161.547 | 146.488 | .001 |
| Within Cell | 3860 | 1.103 | | |
| Ra at $cl_1$ | 2 | 1.042 | .944 | .389 |
| Ra at $cl_2$ | 2 | .912 | .827 | .438 |
| Ra at $cl_3$ | 2 | 8.560 | 7.762 | .001 |
| Within Cell | 3860 | 1.103 | | |
| | | **Perceived Productivity** | | |
| Cl at $ra_1$ | 2 | .725 | .614 | .541 |
| Cl at $ra_2$ | 2 | 1.283 | 1.087 | .337 |
| Cl at $ra_3$ | 2 | 52.331 | 44.352 | .001 |
| Within Cell | 4183 | 1.180 | | |
| Ra at $cl_1$ | 2 | 4.306 | 3.650 | .026 |
| Ra at $cl_2$ | 2 | 1.135 | .962 | .382 |
| Ra at $cl_3$ | 2 | 12.223 | 10.360 | .001 |
| Within Cell | 4183 | 1.180 | | |

Ra =Race with $Ra_1$ =other; $Ra_2$ =black; $Ra_3$ =white.
Cl =Classification with $Cl_1$ =officer; $Cl_2$ =airmen; $Cl_3$ =civilian.

*Table T-3.* Newman-Keuls Sequential Range Test for Classification (Cl) by Race (Ra)

**General Organizational Climate**

**Classification at Race Level 3**

| Response Option | Group Number ($Cl_i$) | 2 | 3-6 |
|---|---|---|---|
| | | 2 | 3 |
| 3-6 | 3 | 13.5879* | |
| 1 | 1 | 18.8398* | 2.7150 |

**Race at Classification Level 1**

| Response Option | Group Number ($Ra_i$) | 1,2,4,6 | 3 |
|---|---|---|---|
| | | 1 | 2 |
| 3 | 2 | 3.2270* | |
| 5 | 3 | 5.3079* | .2766 |

**Race at Classification Level 3**

| Response Option | Group Number ($Ra_i$) | 1,2,4,6 | 3 |
|---|---|---|---|
| | | 1 | 2 |
| 3 | 2 | .1055 | |
| 5 | 3 | 3.8435* | 2.4716 |

**Job Related Satisfaction**

**Classification at Race Level 1**

| Response Option | Group Number ($Cl_i$) | 1 | 2 |
|---|---|---|---|
| | | 1 | 2 |
| 2 | 2 | 1.3423 | |
| 3-6 | 3 | 4.3508* | 5.6912* |

**Classification at Race Level 3**

| Response Option | Group Number ($Cl_i$) | 2 | 1 |
|---|---|---|---|
| | | 2 | 1 |
| 1 | 1 | 3.0277* | |
| 3-6 | 3 | 24.0934* | 18.3184* |

**Race at Classification Level 3**

| Response Option | Group Number ($Ra_i$) | 3 | 1,2,4,6 |
|---|---|---|---|
| | | 2 | 1 |
| 1,2,4,6 | 1 | .4988 | |
| 5 | 3 | 3.7221* | 4.5346* |

**Perceived Productivity**

**Classification at Race Level 3**

| Response Option | Group Number ($Cl_i$) | 2 | 1 |
|---|---|---|---|
| | | 2 | 1 |
| 1 | 1 | 9.6778* | |
| 3-6 | 3 | 11.0720* | 2.0554* |

Table T-3 (*Continued*)

| Perceived Productivity | | | |
|---|---|---|---|
| **Race at Classification Level 1** | | | |
| Response Option | Group Number ($Ra_i$) | 1,2,4,6<br>1 | 3<br>2 |
| 3 | 2 | 1.9217 | |
| 5 | 3 | 3.7685* | .7431 |
| **Race at Classification Level 3** | | | |
| Response Option | Group Number ($Ra_i$) | 1,2,4,6<br>2 | 3<br>2 |
| 3 | 2 | 1.6964 | |
| 5 | 3 | 6.3333* | 2.4183 |

Note: — Only those factor levels having significant simple main effects had Newman-Keuls Sequential Range Tests performed.

*$p < .05$.

Cl =Classification with $Cl_1$ =officer; $Cl_2$ =airmen; $Cl_3$ =civilian.

Ra =Race with $Ra_1$ =other; $Ra_2$ =black; $Ra_3$ =white.

*Organizational Communications Climate (n =4099).* The main effects and interaction effect for classification and race were not significant.

*Job Related Satisfaction (n =3869).* The analysis of variance indicated that tests for main effects and interaction effect were significant (classification =$p < .001$, race =$p < .02$, interaction =$p < .002$). Tests for simple main effects (Table 25) associated with classification indicated that classification was significantly different for race levels $ra_1$ (other) and $ra_3$ (white). Simple main effects for race were significantly different for classification level $cl_3$ (civilians). The Newman-Keuls Sequential Range Test indicated for classification at $ra_1$ (other) significant differences between classification level $cl_3$ (civilians) and the two other classification levels ($cl_1$ and $cl_2$) existed. For classification at $ra_3$ (white), all mean pairs differed significantly from each other.

The Newman-Keuls Sequential Range Test for race at $cl_3$ (civilians) indicated that race level $ra_3$ (white) differed significantly from race levels $ra_1$ (other) and $ra_2$ (black).

*Perceived Productivity (n =4192).* The analysis of variance indicated that the main effects for classification and race and the interaction effect were significant (classification, $p < .04$; race, $p < .001$; and interaction, $p < .001$). Tests for simple main effects associated with classification was significant for race level $ra_3$ (white). Simple main effects for race were significant for classification levels $cl_1$ (officers) and $cl_3$ (civilians). The Newman-Keuls Sequential Range Test indicates for classification at race level $ra_3$ (white) significant differences between all mean pairs.

The Newman-Keuls Test for race at classification level $cl_1$ (officers) indicated a significant difference between race level $ra_1$ (other) and level $ra_3$ (white). For race at classification level $cl_3$ (civilians), there was also the same relationship of level $ra_1$ (other) differing significantly from $ra_3$ (white).

## *APPENDIX U:* ANALYSIS OF CLASSIFICATION BY SEX

The analysis of variance data for classification by sex are provided in Table U-1, the simple main effects are summarized in Table U-2, and the Newman-Keuls Sequential Range Test results are presented in Table U-3.

*General Organizational Climate (n =4086).* For General Organizational Climate, only the main effect for classification (C1) was significant ($p < .001$). Simple main effects indicated that classification for males and females were significant beyond the .001 level. The Newman-Keuls Sequential Range Test for classification at $s_1$ (males) indicated significant differences between classification level $c1_2$ (airmen) and the other two levels ($c1_1$—officers, $c1_3$—civilians). For classification at $s_2$ (females), all classification levels differed significantly from each other.

*Organizational Communication Climate (n = 4086).* Tests for main effects and interaction were not significant.

*Table U-1.* Analysis of Variance Summary Table for Classification (Cl) by Sex (S)

| Source | df | MS | F | p |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Classification (C1) | 2 | 41.3886 | 43.0562 | .001 |
| Sex (S) | 1 | 2.7258 | 2.8356 | .092 |
| Classification x Sex (C x S) | 2 | .9428 | .9808 | .375 |
| Within Cell | 4080 | .9613 | | |
| **Organizational Communications Climate** | | | | |
| Classification (C1) | 2 | .1305 | .1266 | .881 |
| Sex (S) | 1 | .0169 | .0163 | .898 |
| Classification x Sex (C x S) | 2 | .4953 | .4805 | .619 |
| Within Cell | 4080 | 1.0307 | | |
| **Job Related Satisfaction** | | | | |
| Classification (C1) | 2 | 123.1778 | 111.9627 | .001 |
| Sex (S) | 1 | 7.2402 | 6.5810 | .010 |
| Classification x Sex (C x S) | 1 | 2.1804 | 1.9818 | .138 |
| Within Cell | 3852 | 1.1002 | | |
| **Perceived Productivity** | | | | |
| Classification (C1) | 2 | 34.9528 | 29.5690 | .001 |
| Sex (S) | 1 | .0006 | .0005 | .982 |
| Classification x Sex (C x S) | 2 | 4.9702 | 4.2046 | .015 |
| Within Cell | 4175 | 1.1821 | | |



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*Table U-2.* Simple Main Effects Summary Table for Classification (Cl) by Sex (S)

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | General Organizational Climate | | |
| Cl at $s_1$ | 2 | 103.1874 | 107.3415 | .001 |
| Cl at $s_2$ | 2 | 10.8055 | 11.2405 | .001 |
| Within Cell | 4080 | .9613 | | |
| | | Job Related Satisfaction | | |
| Cl at $s_1$ | 2 | 93.8320 | 85.2863 | .001 |
| Cl at $s_2$ | 2 | 51.1243 | 46.4682 | .001 |
| Within Cell | 3852 | 1.1002 | | |
| S at $cl_1$ | 1 | 3.1310 | 2.8458 | .092 |
| S at $cl_2$ | 1 | .4104 | .3730 | .541 |
| S at $cl_3$ | 1 | 6.7236 | 6.1113 | .013 |
| Within Cell | 3852 | 1.1002 | | |
| | | Perceived Productivity | | |
| Cl at $s_1$ | 2 | 32.3736 | 27.3865 | .001 |
| Cl at $s_2$ | 2 | 21.9043 | 18.5300 | .001 |
| Within Cell | 4175 | 1.1821 | | |
| S at $cl_1$ | 1 | .1105 | .0935 | .760 |
| S at $cl_2$ | 1 | 4.5405 | 3.8410 | .050 |
| S at $cl_3$ | 1 | 5.4307 | 4.5941 | .032 |
| Within Cell | 4175 | 1.1821 | | |

Cl =Classification with $Cl_1$ =officer; $Cl_2$ =airmen; $Cl_3$ =civilian.
S =Sex with $s_1$ =male; $s_2$ =female.

*Table U-3.* Newman-Keuls Sequential Range Test for Classification (Cl) by Sex (S)

General Organizational Climate

Classification at Sex Level 1

| Response Option | Group Number ($Cl_i$) | 2 | 3-6 |
|---|---|---|---|
| | | 2 | 3 |
| 3-6 | 3 | 13.1027* | |
| 1 | 1 | 18.1875* | 1.4030 |

Classification at Sex Level 2

| Response Option | Group Number ($Ra_i$) | 2 | 3-6 |
|---|---|---|---|
| | | 2 | 3 |
| 3-6 | 3 | 5.7572* | |
| 1 | 1 | 4.4799* | 1.9524* |

Sex at Classification Level 3

| Response Option | Group Number ($S_i$) | 2 |
|---|---|---|
| | | 2 |
| 1 | 1 | 4.1651 |

Table U-3 (*Continued*)

**Job Related Satisfaction**

**Classification at Sex Level 1**

| Response Option | Group Number ($Cl_i$) | 2 vs 2 | 1 vs 1 |
|---|---|---|---|
| 1 | 1 | 2.0107 | |
| 3-6 | 3 | 18.4202* | 14.5595* |

**Classification at Sex Level 2**

| Response Option | Group Number ($Cl_i$) | 2 vs 2 | 1 vs 1 |
|---|---|---|---|
| 1 | 1 | 2.4734 | |
| 3-6 | 3 | 13.6333* | 3.2926* |

**Sex at Classification Level 3**

| Response Option | Group Number ($S_i$) | 1 vs 1 |
|---|---|---|
| 2 | 2 | 3.4964 |

**Perceived Productivity**

**Classification at Sex Level 1**

| Response Option | Group Number ($Cl_i$) | 2 vs 2 | 3-6 vs 3 |
|---|---|---|---|
| 3-6 | 3 | 6.3159* | |
| 1 | 1 | 9.3458* | 1.0473 |

**Classification at Sex Level 2**

| Response Option | Group Number ($Cl_i$) | 2 vs 2 | 1 vs 1 |
|---|---|---|---|
| 1 | 1 | 2.3983 | |
| 3-6 | 3 | 8.5742* | 1.3174 |

**Sex at Classification Level 2**

| Response Option | Group Number ($S_i$) | 2 vs 2 |
|---|---|---|
| 1 | 1 | 2.7714* |

**Sex at Classification Level 3**

| Response Option | Group Number ($S_i$) | 1 vs 1 |
|---|---|---|
| 2 | 2 | 3.0317* |

**Note:** — Only those factor levels having significant simple main effects had Newman-Keuls Sequential Range Tests performed.

*$p < .05$.

Cl =Classification with $Cl_1$ =officer; $Cl_2$ =airmen; $Cl_3$ =civilian.

S =Sex with $S_1$ =male; $S_2$ =female.

*Job Related Satisfaction (n =3858).* Tests for main effects were significant for classification ($p < .001$) and sex ($p < .01$). Test for interaction was not significant. Test for simple main effects indicated that classification for both $s_1$ (males) and $s_2$ (females) was significant beyond the .001 level. Test for simple main effects for sex at $cl_3$ (civilians) was significant ($p < .01$); however, the other classification levels were not significant. The Newman-Keuls Sequential Range Test for classification at $s_1$ (males) and at $s_2$ (females) indicated significant differences between classification level $cl_3$ (civilians) and the other two levels ($cl_1$—officers, $cl_2$—airmen).

The Newman-Keuls Sequential Range Test for sex at $cl_3$ (civilians) also indicated that male and female civilians significantly differed in their responses concerning job satisfaction.

*Perceived Productivity (n =4181).* Test for main effects was significant for classification ($p < .001$) but not for sex. Test for interaction (CIXS) was significant ($p < .02$). Tests for simple main effects indicated that class fication at $s_1$ (males) and at $s_2$ (females) were significant beyond the .001 level. Simple main effects for sex by classification level $cl_2$ (airmen) and $cl_3$ (civilian) were significantly different at the .05 and .03 levels respectively. The Newman-Keuls Sequential Range Test for classification at $s_1$ (males) indicated that male airmen ($cl_2$) differed significantly from male officers ($cl_1$) and male civilians ($cl_3$). Classification at $s_2$ (females) indicated that female airmen ($cl_2$) differed from female civilians ($cl_3$).

The Newman-Keuls Sequential Range Test for sex at classification level $cl_2$ (airmen) and at $cl_3$ (civilians) indicated male and female airmen and civilians differed significantly in their perceptions of productivity.

## *APPENDIX V:* ANALYSIS OF SEX BY COMMUNICATION

The analysis of variance data for sex by communication are provided in Table V-1, the simple main effects are summarized in Table V-2, and the Newman-Keuls Sequential Range Test results are presented in Table V-3.

*General Organizational Climate (n = 4108).* For General Organizational Climate, the main effect for sex and the interaction effect (SXC) were not significant. The test for simple main effects indicated that communications (C) was significantly ($p < .001$) different for males ($s_1$). The Newman-Keuls Sequential Range Test indicated that all communications levels for males differed significantly from each other. Figure 22 indicates that $c_4$ was the highest, followed in descending order by $c_3$, $c_2$, and $c_1$.

*Table V-1.* Analysis of Variance Summary Table for Sex (S) by Communication (C)

| Source | df | MS | F | P |
|---|---|---|---|---|
| **General Organizational Climate** | | | | |
| Sex (S) | 1 | 1.8307 | 1.8439 | .175 |
| Communication (C) | 3 | 15.9058 | 16.0209 | .001 |
| Sex x Communication (S x C) | 3 | .7644 | .7700 | .511 |
| Within Cell | 4074 | .9928 | | |
| **Organizational Communications Climate** | | | | |
| Sex (S) | 1 | 2.8420 | 2.7572 | .097 |
| Communication (C) | 3 | .4915 | .4768 | .698 |
| Sex x Communication (S x C) | 3 | .9238 | .8962 | .442 |
| Within Cell | 4074 | 1.0308 | | |
| **Job Related Satisfaction** | | | | |
| Sex (S) | 1 | 22.0318 | 18.8427 | .001 |
| Communication (C) | 3 | 5.0854 | 4.3493 | .005 |
| Sex x Communication (S x C) | 3 | 1.9780 | 1.6917 | .167 |
| Within Cell | 3845 | 1.1693 | | |
| **Perceived Productivity** | | | | |
| Sex (S) | 1 | 4.4952 | 3.8776 | .049 |
| Communication (C) | 3 | 29.1686 | 25.1609 | .001 |
| Sex x Communication (S x C) | 3 | 1.0797 | .9313 | .425 |
| Within Cell | 4167 | 1.1593 | | |

*Table V-2.* **Simple Main Effects Summary Table for Four Criteria, Sex (S) by Communication (C)**

| Source | df | MS | F | p |
|---|---|---|---|---|
| | | **General Organizational Climate** | | |
| **Simple Effects for Sex** | | | | |
| S at $c_1$ | 1 | 1.039 | 1.046 | .307 |
| S at $c_2$ | 1 | .234 | .235 | .628 |
| S at $c_3$ | 1 | .645 | .650 | .421 |
| S at $c_4$ | 1 | 3.597 | 3.623 | .057 |
| Within Cell | 4074 | .993 | | |
| **Simple Effects for Communication** | | | | |
| C at $s_1$ | 3 | 29.321 | 29.534 | .001 |
| C at $s_2$ | 3 | .977 | .984 | .399 |
| Within Cell | 4074 | .993 | | |
| | | **Organizational Communications Climate** | | |
| **Simple Effects for Sex** | | | | |
| S at $c_1$ | 1 | 2.033 | 1.972 | .161 |
| S at $c_2$ | 1 | .314 | .304 | .581 |
| S at $c_3$ | 1 | 1.296 | 1.258 | .262 |
| S at $c_4$ | 1 | .077 | .075 | .784 |
| Within Cell | 4074 | 1.031 | | |
| **Simple Effects for Communication** | | | | |
| C at $s_1$ | 3 | 2.419 | 2.346 | .071 |
| C at $s_2$ | 3 | .300 | .291 | .832 |
| Within Cell | 4074 | 1.031 | | |
| | | **Job Related Satisfaction** | | |
| **Simple Effects for Sex** | | | | |
| S at $c_1$ | 1 | .275 | .235 | .628 |
| S at $c_2$ | 1 | 8.441 | 7.219 | .007 |
| S at $c_3$ | 1 | 34.737 | 29.707 | .001 |
| S at $c_4$ | 1 | 17.643 | 15.088 | .001 |
| Within Cell | 4045 | 1.169 | | |
| **Simple Effects for Communication** | | | | |
| C at $s_1$ | 3 | 6.670 | 5.705 | .001 |
| C at $s_2$ | 3 | 3.072 | 2.628 | .049 |
| Within Cell | 3845 | 1.169 | | |
| | | **Perceived Productivity** | | |
| **Simple Effects for Sex** | | | | |
| S at $c_1$ | 1 | 3.148 | 2.715 | .100 |
| S at $c_2$ | 1 | .705 | .608 | .436 |
| S at $c_3$ | 1 | 1.019 | .879 | .349 |
| S at $c_4$ | 1 | .001 | .001 | 1.001 |
| Within Cell | 4167 | 1.159 | | |
| **Simple Effects for Communication** | | | | |
| C at $s_1$ | 3 | 62.891 | 54.249 | .001 |
| C at $s_2$ | 3 | 5.939 | 5.123 | .002 |
| Within Cell | 4167 | 1.159 | | |

*Table V-3.* Newman-Keuls Sequential Range Test for Sex (S) by Communication (C)

**General Organizational Climate**

**Communication at Sex Level 1**

| Response Option | Group Number ($C_i$) | 1 | 2 | 3 |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| 1 | 2 | 3.3611* | | |
| 2 | 3 | 6.0163* | 4.7287 | |
| 3 | 4 | 8.8317* | 10.4496* | 6.8593* |

**Job Related Satisfaction**

**Communication at Sex Level 1**

| Response Option | Group Number ($C_i$) | 1 | 2 | 3 |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| 1 | 2 | 1.9788 | | |
| 2 | 3 | 2.4707 | .7621 | |
| 3 | 4 | 4.0403* | 3.8679* | 3.9223* |

**Communication at Sex Level 2**

| Response Option | Group Number ($C_i$) | 1 | 2 | 3 |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| 1 | 2 | 2.3157 | | |
| 2 | 3 | 3.1357 | .9801 | |
| 3 | 4 | 3.7882* | 2.0563 | 1.5064 |

**Sex at Communication Level 2**

| Response Option | Group Number ($S_i$) | 1 |
|---|---|---|
| | | 1 |
| 1 | 2 | 3.7996 |

**Sex at Communication Level 3**

| Response Option | Group Number ($S_i$) | 1 |
|---|---|---|
| | | 1 |
| 1 | 2 | 7.7088 |

**Sex at Communication Level 4**

| Response Option | Group Number ($S_i$) | 1 |
|---|---|---|
| | | 1 |
| 1 | 2 | 5.4931* |

**Perceived Productivity**

**Communication at Sex Level 1**

| Response Option | Group Number ($C_i$) | 1 | 2 | 3 |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| 1 | 2 | 6.6796* | | |
| 2 | 3 | 10.1946* | 6.0057* | |
| 3 | 4 | 13.6449* | 12.8111* | 8.2684* |

**Communication at Sex Level 2**

| Response Option | Group Number ($C_i$) | 1 | 2 | 3 |
|---|---|---|---|---|
| | | 1 | 2 | 3 |
| 1 | 2 | 1.4708 | | |
| 2 | 3 | 3.1113 | 2.3590 | |
| 3 | 4 | 4.1396* | 4.4058* | 2.0173 |

Note: — Only those factor levels having significant simple main effects had Newman-Keuls Sequential Range Tests performed.

*$p < .05$.

C =Communication with $C_1$ =very little-little; $C_2$ =moderate; $C_3$ =very frequent; $C_4$ =almost continuous.

S =Sex with $S_1$ =male; $S_2$ =female.

*Organizational Communications Climate (n =4198).* The main effects and interaction were not significant using this criterion.

*Job Related Satisfaction (n =3879).* Tests for main effects for sex (S) and communications (C) were significant beyond the .001 and .005 levels, respectively. The test for interaction was not significant. Tests for simple main effects associated with the communications factor indicated that communications were significantly different for males ($s_1$) and females ($s_2$). The Newman-Keuls Sequential Range Test indicated that males ($s_1$) response option 5 (almost continuous) had a response mean which was significantly higher than for all other male groups. For females, the Newman-Keuls Sequential Range Test indicated that the group responding to the very little and little category ($c_1$, responses 1 and 2) differed significantly from those responding to the very frequent category ($c_4$, response 5). Tests for simple main effects associated with the sex factor and the Newman-Keuls Sequential Range Tests indicate that sex was significantly different for the communication levels, moderate ($c_2$), very frequent ($c_3$), and almost continuous ($c_4$), with the female mean responses being higher than males for levels $c_2$, $c_3$, and $c_4$.

*Perceived Productivity (n =4205).* Tests for main effects for sex (S) and communications (C) were significant beyond the .05 and .001 levels, respectively. The test for interaction was not significant. Tests for simple main effects associated with the communications factor indicated that communications were significantly different for males ($s_1$) and females ($s_2$). The Newman-Keuls Sequential Range Test indicated that all communication levels for males differed significantly from each other with level $c_4$ being the highest, $c_3$ next, then $c_2$, and lastly $c_1$. For females, the Newman-Keuls Sequential Range Test indicated that those responding almost continuous ($c_4$) had a significantly higher mean response when compared to those responding very little and little ($c_1$) and moderate ($c_2$).